Manitoba

ANNUAL REPORT

1983 - 1984

Manitoba
Agriculture

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Contents

General Administration

Manitoba Natural Products Marketing Council 7
Management Services 7
Agricultural Research 9

General Support Services

PAMI 10
Manitoba Farm Machinery Board 10
Communications 10
Economic Analysis 12
Policy Development 13
Marketing 13
Water Services 14

Livestock Management and Marketing

Dairy 15
Dairy Goats 18
Beef 18
Hogs 20
Sheep 23
Poultry 23
Feed Testing Laboratory 25
Veterinary Services 26
Bees and Honey 28

Crops Management and Marketing

Cereals 31
Oilseeds 31
Special Crops 31
Crop Development 33
Insect Infestations 33
Horticulture 34
Forage and Pasture Management 38
Weed Control 40
Soil and Water Management 41
Agricultural Crown Lands 43
Insect Control 46

Training and Development

Farm Management 47
4-H and Youth 48
Rural Home Economics Services 52
Agricultural Extension Centre 53
Agricultural Manpower Services 53
Agricultural Societies 55

Manitoba Agriculture
Executive and Directors
April 1, 1983 to March 31, 1984

Executive

Honourable Bill Uruski, Minister

G.J. Gartner, Deputy Minister

T.L. Pringle, Assistant Deputy Minister
Agricultural Development and Marketing Division

C.C. Cranston, Assistant Deputy Minister
Farm and Rural Development Division

G.J. Lacomy, Assistant Deputy Minister
Management and Operations Division

Executive Director
Policy and Economics Division

B. Dryburgh, Policy and Program
Coordinator

Directors

Administrative and Accounting Services —
R.L. Baseraba
Water Services - E.W. Griffin
Agricultural Crown Lands - G.R. Lahaie (Act.)
Animal Industry - C.H. McNaughton
Communications - V.E. McNair
Agricultural Training - R.M. Deveson
Policy Development - C. Lee
Economics Analysis - F.L. Paquin
Marketing - A.E. Gascoigne
Personnel Services - D.H. Burch
Soils and Crops - G.D. Webster
Technical Services - D.L. Smith (Act.)
Veterinary Services - J.A. McPhedran
Manitoba Marketing Board - R. Kapilik,
Secretary Manager
Manitoba Agricultural Lands Protection Board -
J.F. Muirhead
Central - B.F. Manning
Eastern - D.I. Donaghy
Interlake - A.T. Dickson
Northwest - R. Chychota
Southwest - J.L. Neabel

MANITOBA

MINISTER OF AGRICULTURE
WINNIPEG
R3C 0V8

To Her Honour,
Pearl McGonigal,
Lieutenant Governor for the Province of Manitoba

Your Honour:

I have the honour to submit herewith the Report of the Department of Agriculture for the period April 1, 1983 to March 31, 1984.

Your obedient servant,

Bill Uruski,
Minister of Agriculture

MANITOBA

DEPUTY MINISTER OF AGRICULTURE

WINNIPEG R3C 0V8

Honourable Bill Uruski
Minister of Agriculture
Province of Manitoba

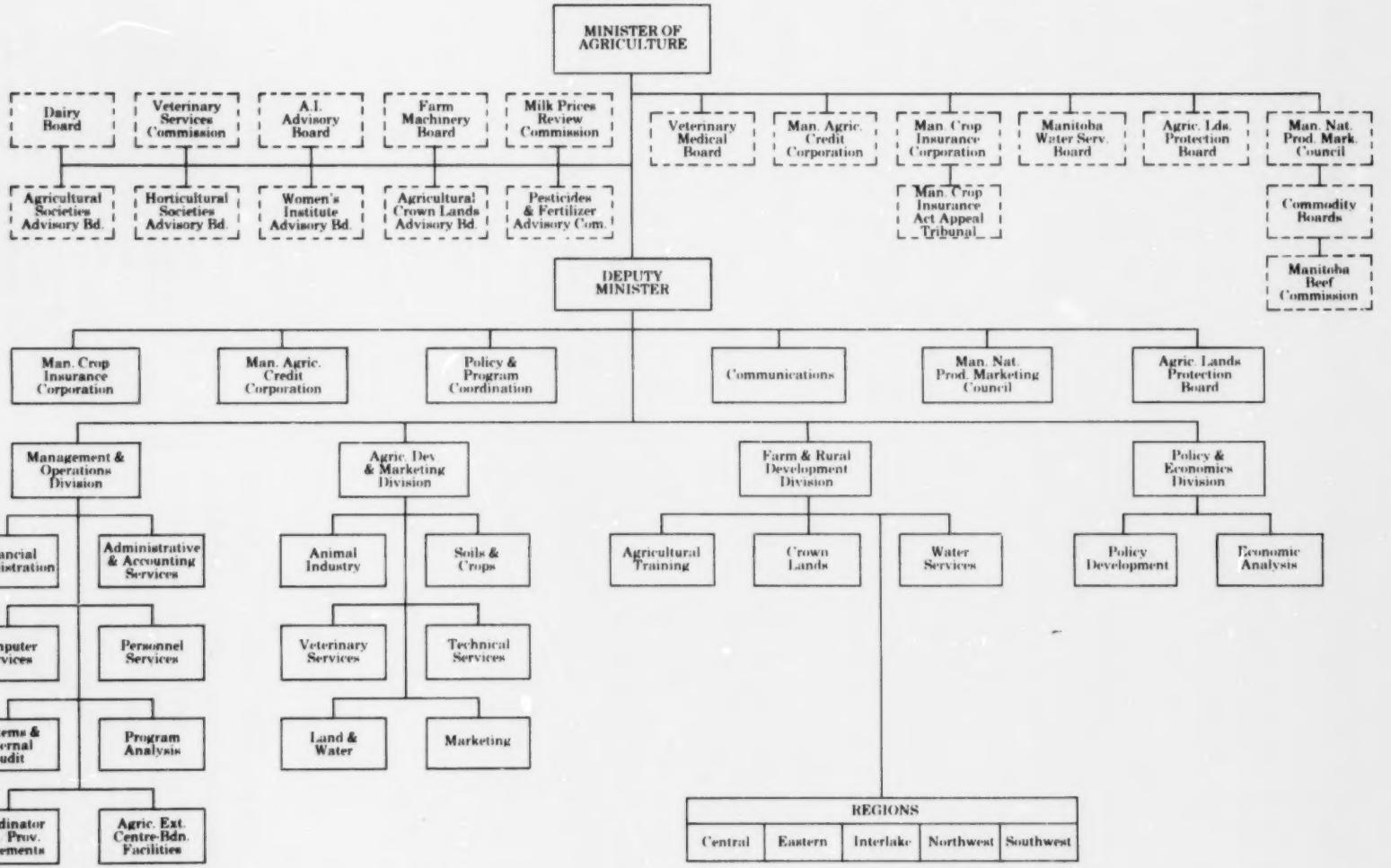
Sir:

It is my pleasure to present the annual report of the Manitoba Department of Agriculture for the twelve month period ending March 31, 1984.

Respectfully submitted,

G.J. Gartner

G.J. Gartner
Deputy Minister


MINISTER OF AGRICULTURE
Dairy Board
Veterinary Services Commission
A.I. Advisory Board
Farm Machinery Board
Milk Prices Review Commission
Agricultural Societies Advisory Bd.
Horticultural Societies Advisory Bd.
Women's Institute Advisory Bd.
Agricultural Crown Lands Advisory Bd.
Pesticides & Fertilizer Advisory Com.
Veterinary Medical Board
Man. Agric. Credit Corporation
Man. Crop Insurance Corporation
Man. Crop Insurance Act Appeal Tribunal
Manitoba Water Serv. Board
Agric. Lds. Protection Board
Man. Nat. Prod. Mark. Council
Commodity Boards
Manitoba Beef Commission
DEPUTY MINISTER
Man. Crop Insurance Corporation
Man. Agric. Credit Corporation
Policy & Program Coordination
Communications
Man. Nat. Prod. Marketing Council
Agric. Lands Protection Board
Management & Operations Division
Agric. Dev & Marketing Division
Farm & Rural Development Division
Policy & Economics Division
Financial Administration
Administrative & Accounting Services
Computer Services
Personnel Services
Systems & Internal Audit
Program Analysis
Coordinator Fed. Prov. Agreements
Agric. Ext. Centre-Bdn. Facilities
Animal Industry
Soils & Crops
Veterinary Services
Technical Services
Land & Water
Marketing
Agricultural Training
Crown Lands
Water Services
REGIONS
Central
Eastern
Interlake
Northwest
Southwest
Policy Development
Economic Analysis

General Administration

Manitoba Natural Products Marketing Council

In 1983-84, the Manitoba Natural Products Marketing Council continued to be responsible to the Minister of Agriculture for the administration of the Natural Products Marketing Act and the supervision of the following commodity marketing boards and commissions operating there under:

- The Manitoba Beef Commission
- The Manitoba Chicken Broiler Producers' Marketing Board
- The Manitoba Egg Producers' Marketing Board
- The Manitoba Fluid Milk Marketing Commission
- The Manitoba Hog Producers' Marketing Board
- The Manitoba Honey Marketing Board
- The Manitoba Milk Producers' Marketing Board
- The Manitoba Vegetable Producers' Marketing Board
- The Manitoba Turkey Producers' Marketing Board

In the performance of its supervisory function, the Manitoba Natural Products Marketing Council, through meetings, correspondence, perusal of minutes, reviews of financial statements and the prior approval of certain orders of the above marketing boards and commissions, has been assured that they were continuing to operate in accordance with the regulations prescribed in their respective marketing plans and the Natural Products Marketing Act.

The Council convened twenty-four regular meetings, the majority of which were attended by delegations to discuss producer boards' policies, propose amendments to various orders and regulations or to appeal decisions by the producer boards. Council approved amendments to the Broiler, Potato, Root Crop, Laying Hen and Pullet Quota Orders, as well as the Laying Hen Penalty Order, and the Milk Quality Penalty Levies Regulation. Council also granted administration levy increases on potatoes, turkeys, eggs, and chickens.

Under the Act, the Manitoba Marketing Council is required to hear appeals by persons affected by a decision, directive or order made or given by a producer board or marketing commission. Council heard twelve such appeals and rendered decisions to dismiss nine and grant three appeals. Six appeals were heard against the Manitoba Beef Commission with five being dismissed, three against the Manitoba Milk Producers' Marketing Board with two being granted, two against the Manitoba Egg Producers' Marketing Board, both dismissed and one against the Manitoba Turkey Producers' Marketing Board which was dismissed.

The Council participated in a number of discussions with the Manitoba Milk Producers' Marketing Board and the Manitoba Honey Marketing Board respecting revisions to their marketing plans. It was Council's desire to reorganize their plans to clearly state the authority and limitation on authority, as well as to formalize a number of developed policies into regulations. The plans would also present a more readable and comprehensive statement of the boards' organizations, duties and powers and would be consistent with those of other boards.

Of particular interest to Council were discussions held respecting quota transfer policy, vertical integration and grandfather rights associated with quotas above the maximum limits. These issues continue to be under review with the various marketing boards.

As a signatory to the Federal/Provincial agreement respecting the marketing of broiler chickens in Canada, Council along with Manitoba's other two signatories twice appealed to the National Farm Products Marketing Council. These appeals concerned the decisions of the Canadian Chicken Marketing Agency to allocate 1984 provincial market shares on the basis of criteria not contained in the Agreement and the relative insignificant weighting given to comparative advantage. National Council upheld the first appeal and dismissed the second appeal, although a number of recommendations on the 1985 quota allocation were made by National Council.

Council undertook three district elections for the Manitoba Milk Producers' Marketing Board, resulting in two new members being declared elected and one incumbent by acclamation. Council also attended the annual meetings of the producer boards and supervised the elections as required.

The Natural Products Marketing Council continued with its policy of preventative enforcement and no court actions were initiated during this year.

Management Services

Administrative and Accounting

The Branch provides professional management accounting and administrative support services to the Department. Services include financial statement analysis; system and procedures design and implementation; payment documentation and recording; revenue analysis and control; summer student recruitment and coordination; records management coordination; preparation of Treasury Board Submissions; word processing

review and analysis; administration of signing authorities; office space, furniture and advertising coordination as well as other support services.

Major activities during the year included;

— records management, where scheduling of 40 authority schedules of the Department occurred.

— cost benefit study completed for word processing application for six branches in the Winnipeg area where two processors were installed, including all furnishings.

— coordination of recruitment of 91 summer students, including establishment and administration of special trainee rates and audits on interviews.

— Phase I implementation of Centrex telecommunications system for Winnipeg area.

— central processing of 1,980 requisitions for office supplies, advertising, office equipment and telecommunications service.

— monitoring of direct purchase orders and assisting branches in acquisition of goods.

— processing of 25,737 payment transaction totalling 48.4 million dollars and issuing 5,600 receipts for revenue collections amounting to $7,593,000.

The year also saw the completion of the Water Services Board organization and administrative practises review, as well as continued provision of advice and counsel to the Commissions and Corporations in the Ministry.

Internal Audit and Systems

Internal Audit and Systems has the responsibility of undertaking reviews of existing and proposed financial and procedural program systems of the Department and related agencies. In addition, this position functions as a resource to senior management and offers advice in formulating policies which will ensure efficient program delivery.

Activities for the year included:

— reviews of several program areas which resulted in making recommendations to improve operations in an economic, efficient and effective manner.

— an ongoing analysis of budget presentations of the Prairie Agricultural Machinery Institute and the Keystone Centre.

— involvement on various Committees and Boards to ensure program policies of the Department and central agencies of the Government were adhered to.

— an examination of the records of major poultry processing plants to determine whether or not quota infractions were occurring.

— preparation of the monthly financial statements of the Manitoba Agricultural Credit Corporation for the period June 1 to August 31.

Personnel Services

Personnel Services provides advisory assistance to management and staff on the recruitment and selection of employees, wage and salary administration, employee relations and staff development and training.

Within the Department, Personnel Services concentrated their efforts on providing leadership to the development of farm management skills in staff, assisting them in dealing with clients facing financial difficulties.

Resulting training program met needs in client counselling, financial analysis and computerization.

Within the Manitoba Crop Insurance Corporation, Manitoba Agricultural Credit Corporation and Manitoba Beef Commission, Personnel Services concentrated their efforts on organizational development and support as those organizations move forward to meet their client needs in the 1980's.

Computer Services

Computer Services is responsible for maintaining, enhancing and developing computer management systems that assist in efficient and effective operations of departmental programs.

Activity increased in the development of micro-computer Farm Management software to be used by Agricultural Representatives and Specialists in the Regions. One on one and group computer training sessions were also set up for these same new computer users.

A computer room was set up in the Norquay Building as a shared resource for all branches. Installed in this area are 2 word processing units with shared printers, 2 micro computers with printers and a plotter, two dial up terminals and Telidon unit. Activity is increasing daily in this area.

Development continued for the Manitoba Beef Commission in the area of automated slaughter

and unfinished beef pooling and stabilization systems. A systems needs study was also initiated as part of a long term strategy.

Program Analysis

Program Analysis for the year centered around three major areas:

1. assisting individual staff, branches or regions and divisions to evaluate the efficiency and effectiveness of departmental programs and activities;
2. cooperating with the financial administrator, departmental directors and managers in preparing budget estimates, revenue expectations and financial management control for departmental and government review;
3. providing departmental management with specific program activity reviews and recommendations.

Assistance and coordination was provided regional directors in the development and implementation of district and regional program planning and reporting, including input and output information. Emphasis continued to be placed on evaluation of programs and activities. Similar assistance and coordination was provided branch directors in developing and implementing a program planning and reporting system, including input and output information. Close liaison was maintained with directors and program managers for development and program information support of the budget estimates and to assist directors in maintaining budget control.

During 1983-84 the branch coordinated the department's requirement of relating inputs and outputs to the various departmental programs. These activities and results were grouped under the following program areas; Crops, Livestock, Farm Financial Management and Credit, Soil and Water Conservation and Management, and Rural and Human Development.

General reviews were made of several activities within the department. In addition, support was provided to the five task groups developing programs suitable for implementation under the federal-provincial Economic Regional Development Agreement. Other activities continued on the evaluation procedures planned under the federal-provincial Agro-Man Agreement.

The branch provided an update summary of all departmental programs and made it available to staff and the public, on request.

Financial Administration

Financial Administration provided support to all divisions of the department. Activity centered on four major areas; annual estimates, sessional notes, cash flows and supplementary estimates.

The Department's annual estimates for the 1984-85 fiscal year were compiled through close cooperation with each director and presented to the Minister and Executive for review before Cabinet presentation. Sessional notes, describing the budget details for discussion by the Minister in the Legislature were prepared along with financial details at the appropriation level.

Continued emphasis was placed on estimating the monthly cash flow of expenditures and revenue at the program level for more effective reporting. Revised and supplementary estimates for the 1983-84 fiscal year were compiled for unforeseen and emergency expenditures.

Financial reports, expenditure codes, unique codes and other related matters were developed.

Agricultural Research

University of Manitoba

During the fiscal year, Manitoba Agriculture provided a grant of $850,000 to the University of Manitoba in support of the University's agricultural research program. The grant was used for the development and maintenance of the University's central research station at Glenlea. Funds were used, as well, to provide operational support for research projects carried out in all major disciplines, including agricultural economics and farm management, agricultural engineering, animal science, entomology, food science, plant science and soil science.

Manitoba Agricultural Services Coordinating Committee (MASCC)

Staff from the Department participated in the activities of the Manitoba Agricultural Services Coordinating Committee (MASCC). MASCC is an advisory committee, which recommends on methods of improving the quality of agricultural services provided to the farmers and others in the agricultural industry. The Committee is chaired by the Deputy Minister of Manitoba Agriculture, and its membership includes representatives from the University of Manitoba, Agriculture Canada and Manitoba Agriculture. Input into formulation of recommendations is also provided by farmers and representatives from agri-business.

In 1983-84, MASCC approved recommendations pertaining to both research and to non-research development. Recommendations of national significance were forwarded to the Canadian Agricultural Services Coordinating Committee (CASCC). Those of primarily provincial significance were directed to provincial agencies, including the Department of Agriculture, for consideration and implementation.

General Support Services

PAMI

The Prairie Agricultural Machinery Institute is a joint venture of the provinces of Manitoba, Saskatchewan, and Alberta. It was established in 1974 to evaluate farm machinery and to carry out development work to improve the design of farm machinery in the prairies. The Institute has facilities at Humboldt, Saskatchewan, Lethbridge, Alberta and Portage La Prairie, Manitoba.

All test reports published by the Institute are provided to subscribers at a cost of $5 per year. Individual test reports are available at no charge upon request from the Prairie Agricultural Machinery Institute, P.O. Box 1900, Humboldt, Sask. S0K 2A0.

The government of Manitoba made a grant of $525,000 to PAMI for the year 1983.

Manitoba Farm Machinery Board

The Manitoba Farm Machinery Board is responsible for the administration of the Manitoba Farm Machinery and Equipment Act. The administration of this Act involves the Board and Administrative Staff in all areas related to the farm implement industry; functional purpose of equipment, statute warranty, replacement repair parts, purchaser financing, and the relationship between all concerned — farmer — dealer — manufacturer — vendor. The continual increase in capital expenditure for farm machinery requires a priority be given to policies and programs of the Board, for continual improvement in parts and shop services, particularly at the dealership level.

During the year 170 dealership inspections were completed with particular emphasis placed on the dealership parts and service department. The time frame necessary for the supplying of repair parts not in dealer inventory was requested and discussed with the dealership principal.

The Board received 209 registered complaints, an increase of 37% over the previous year. Of the total complaints received, 51% involved a conflict or difference of opinion as to what constitutes warranty as defined by the statutes. The remainder involved dealer service and parts availability problems. As the sophistication of farm machinery increases, the complexities of resolving warranty disputes increases proportionately.

Financial lenders submitted 215 applications for leave to repossess. This represents an increase of 20% over the preceding year. As required by the Act, each application was fully investigated prior to the Board rendering a decision. The number of units where the lienholder actually takes physical possession remains constant at about 25%. In most other cases arrangements are agreed to between the lender and the purchaser prior to repossession date. Board staff are frequently involved in financially counselling producers who have had an application for leave to repossess filed against one or more units of farm machinery.

As of March 31, 1984, the Board had issued 456 dealer licences, which included the licencing of 34 new dealers. There were 101 dealers bonded under the Manitoba Farm Machinery and Equipment Act Fund.

The Board issued 159 vendor licences of which 41 were bonded under the Fund. The Manitoba Farm Machinery and Equipment Act Fund offers a bonding service to both dealer and vendor. The Fund is administered by the Manitoba Farm Machinery Board.

Due to the economic conditions prevalent in the agricultural economy, the 1983-84 year was an extremely demanding one for the Board and for staff. The Board met with provincial and national farm equipment groups, was involved with the Assiniboine Community College in the development of the farm machinery mechanics course and met frequently in arbitration meetings in order to resolve complaints and to investigate the more complicated applications to reposses. During the year staff became more and more involved in the financial counselling of producers to negotiate new repayment schedules with lender.

The Board received more requests for assistance and information than ever before. These enquiries covered such areas as: availability of special and obsolete parts, proper completion of statutory purchase contracts, rejection procedures, termination of dealer/vendor agreements and other matters of importance to individual farmer purchasers, dealers and vendors.

Communications Branch

Communication services for the department continued to be coordinated through the

Communications Branch and the Communications specialists in the regions. These services were designed to support all policies, programs and activities of the department. Direct general support is provided on a daily basis through mass media. Support services are provided to other staff through print media, audio visual productions and a wide range of instructional and communication aids.

A new approach to communications on department priority programs was instigated during the year, through the development and application of communication strategies. These were developed through close liaison with program managers and proved to be useful in executing planned communication activities on priority areas. Responsibility for each major strategy was specifically assigned to one communication staff member.

Print Services:

Press — The weekly issue of a press release packet continued to be the mainstay of the department's press service. During the year 235 releases were issued to nearly 800 recipients. Farm press and community weekly pick-up continued at a high level. Internal information sheets headed Intercom were issued to all department staff on 59 occasions. Specialized press coverage was provided for such major activities as Manitoba Agronomist Conference, Weed Fairs, Hog Days, Grain Days and the Soils '84 homestudy course.

Publications — In producing some 300 print projects during the year, the publications section provided services ranging from writing, editing and design, to printing arrangements and distribution. Productions included annual publications, technical bulletins and factsheets. Other print production included design and printing of forms, letterheads, charts, maps, etc.

The Branch's Distribution Centre continued to handle the distribution of all publications, primarily through the department's 40 rural offices.

During the year some 600,000 pieces of print information were distributed to the public.

Audio Visual Services:

Radio — The major radio service "Country Comment" was produced and aired on a daily basis on 12 rural stations in Manitoba. Timely agricultural information was provided through the program "Consumer Update". During the spring and summer months a weekly insect report was provided to rural stations and during the same period a three times per week horticultural feature was distributed to rural and city radio stations. Several special series of programs were produced, including a 15 item series on Soils '84.

Television — For the eighth fall-winter season the department's weekly TV program "Farmscene" was produced and telecast province wide on the CKY-TV network. While items were varied, an emphasis was placed on the areas of beef production and soil and water conservation. A weekly regional half-hour program called "Agrinews" was produced by the Northwest regional staff and telecast in that region.

Film Production — Substantial 16 mm film production was maintained, mostly in support of the department's regular television services. Some 48,000 feet of film was shot and edited during the year. Following telecast, many of these items were made available in film or video tape form for additional uses.

Graphic Design — With the transfer out of the department of our illustrator, service in this area was somewhat curtailed, but design services did become available through centralized creative services.

Still Photography — The need for still photography services continued with requirements for television, publications, slide sets, homestudy lessons, displays and for press service. A significant addition was made to the photo file, which is available to the entire department. During the last year, 9 slide/tape productions were completed for general use.

Audio Visual Library — The Branch's Distribution Centre stocks some 250 films and slide sets for use primarily by staff, community groups and schools. Booking of these materials during the year totalled 1,380.

Promotion and Advertising:

The Communications Branch continued to handle most advertising done on behalf of the whole department and on many special projects. During the year major advertising and promotion activity was carried out on tissue testing service, fall soil testing, Manitoba Beef Commission, Hog Days, Weed Fairs, Soils '84 homestudy course, Money Management homestudy course, Outlook Conference and Grain Days.

Soils '84 Homestudy Course:

The Soils '84 course produced this year was the fifth annual homestudy course produced and coordinated by Manitoba Agriculture. A registration of 2,100 indicated a successful course. A follow-up evaluation study showed strong

support for the soils course and 90 per cent of the respondents stated they would take further courses offered in the homestudy pattern. Supplementary course material was produced through special press, radio and TV features and through district and regional meetings.

Telidon Service:

The department maintained its involvement in the Grassroots telidon service, through the provision of 600 pages of information on the data base and through 22 department offices equipped with receiver terminals. Current information on the data base was updated on a bi-weekly basis.

Regional Communication Services:

Each of the five regions has a communications specialist on staff to provide communication services on behalf of the entire region. An important part of this work involves mass media, although the existance and availability of media outlets varies greatly from region to region. The two extremes can be illustrated by the Northwest region which has both radio and television specifically available for the region and the Interlake region which has neither. In the latter case the alternative is to place increased emphasis on regional and district newspapers and newsletters.

All regional communications specialists provide an advisory and consultative service to regional staff on communication matters. In addition, they are regularly involved in producing material for the media. This service varies from region to region. In the Northwest daily radio items and a weekly half-hour TV show were produced specifically for that region. In other regions broadcast items are produced on either a weekly or periodic basis.

The regional specialists were also regularly involved in producing instructional materials for other regional staff to use and often advice was given on the proper use of such materials. In other cases the communicators provided guidance for staff news columns, radio and TV participation, photography techniques and printing and publishing activities.

All regional communicators were assigned communication strategies for one major priority program. They were responsible for working with the program manager concerned in developing and implementing the strategy. These specialist were also much involved with the development of a communications strategy for their own region. In many cases this was supported by a regional communication planning committee.

Other regional communications services included regional advertising, general promotion and public relations related to regional interests and a support to many province-wide projects coordinated by the Communications Branch.

Economic Analysis

Staff of the Analysis Section prepare and distribute up-to-date marketing information and analysis to producers, other departmental and government staff and the agricultural industry. Staff have ready access to North American market information through Reuters News Service, the U.S.D.A. and Agriculture Canada publications, I.P. Sharp data service and local marketing authorities.

Statistics

The Statistics Section's major responsibility is to acquire and provide selected data on Manitoba agriculture for use by the Manitoba government and its staff, the Federal government and its staff, farm organizations and farmers, researchers and the general public.

During the year the following publications were prepared for distribution to the agriculture industry:

- 1982 Yearbook of Manitoba Agriculture
- Weekly Crop Reports
- Monthly Agricultural Conditions Report
- Statistical reports on crop and livestock production
- Statistical reports on farm finances such as receipts, expenses, income, value of production, wages and price indices
- Reports on corn, special crops and herbicides compiled from surveys carried out by the Section
- Report on the vegetable survey in conjunction with the vegetable horticulturist and Statistics Canada

Assistance was provided to Statistics Canada in preparing final estimates for many of the crop and livestock statistics prepared and released by Statistics Canada. Close contact was maintained with the Agricultural Statistics Division of Statistics Canada and provincial agricultural statisticians in order to resolve problems affecting the statistics program of Manitoba Agriculture.

Manitoba Milk Price Review Commission

Duties of the Commission included developing a dairy cost of production formula, drawing up regulations, dealing with public enquiries as well as other work connected with dairy production and milk pricing in the province.

Manitoba Agriculture's Outlook Conference provides a regionalized view of future prospects for the industry. The Conference is one of the Department's major extension forums providing producers with information on market trends. The 1984 Outlook Conference was held at Brandon and Winnipeg. Staff also presented market information at local producer meetings.

Other areas reviewed by the Analysis Section included the impact of the Hog Stabilization Program on the provincial economy, the effect of stabilization payments on farm income, the potential for cattle production in Northern Manitoba, and the impact of the sugar beet industry on the Manitoba economy.

Policy Development

The Policy Development Branch conducts research, analyzes issues and assists in long-range policy and program planning of the Department. These responsibilities include:

a) analysis of conditions and factors affecting the agricultural and rural community

b) evaluation of Departmental programs and policies and their impact on the agricultural economy, and

c) negotiations and discussions pertaining to interdepartmental and intergovernmental projects and agreements.

The 1983-84 major emphasis was placed on:

1. evaluating various proposals for a national red meat stabilization plan and cooperating in the development alternatives.
2. reviewing the crop insurance program
3. analyzing various proposed agricultural resource development and conservation programs under ERDA,
4. evaluating various alternatives for national quota allocation as related to supply managed commodities.
5. updating the cost-of-production models for the beef and hog stabilization plans and
6. defining the financial structure of farms in Manitoba and developing policies to strengthen the family farm including financing, credit requirements and availability.

Marketing

The Marketing Branch is responsible for providing marketing assistance to Manitoba producers, marketing boards, associations and industry who are involved in the production and/or processing of agricultural commodities. Branch staff strive to identify, develop, maintain and expand domestic, national and international markets for a wide range of products. They provide market investigation services, information, counselling, give assistance with export, transportation and financial procedures and contract negotiations. Staff also arrange and conduct incoming and outgoing missions and provide commodity promotional ideas and materials. The Branch also develops and maintains contacts with Canadian embassies and consulates and foreign government personnel, and with Agriculture Canada and the federal Department of External Affairs.

During the year staff were involved in arranging and conducting 19 missions in the province. Delegations visiting Manitoba included Agriculture and trade officials from Algeria and Nicaragua, buckwheat millers and poultry buyers from Japan, livestock buyers from Japan, Mexico, Algeria, and Canada; and silverskin onion buyers from Eastern Canada.

Market investigation missions were conducted by staff to Guyana on canola oil; to Costa Rica on black beans; to Cuba on canola meal feeding trials; to the United States on Red Meats and to the Livestock Show with pre-sold Beef-Breeding Stock to Chilhuahua, Mexico. The Manitoba Minister of Agriculture led a special mission to Japan in December 1983.

Continuing liaison is provided by staff officers with Manitoba companies and international buyers for bids, prices and samples to facilitate sales and shipments of Manitoba agricultural commodities.

The 10th annual Manitoba Food Products Event was held to increase the awareness and comsumption of Manitoba grown and processed foods. It was coordinated with marketing boards, producer associations, food processors, manufacturers, brokers, food wholesalers and retailers throughout the province. The theme "Take Home Manitoba Grown" was utilized in full color in-store banners, 3½ million special grocery bags, television commercials and in newspaper ads of the major retail food chains.

During the year, the Marketing Branch provided displays and participated in the following trade shows: The Canadian Fruit Wholesalers Association Annual Meeting and Exhibition (Toronto); The American Pork Congress (Kansas City); Agribition (Regina); and the Expogan '83 Livestock Show (Chihuahua, Mexico).

In conjunction with Manitoba producer boards, associations and food suppliers, the Branch initiated several single commodity promotions and seven cooperative promotions. These were held at the Royal Manitoba Winter Fair; Red River Exhibition and four Shopping Malls - Clearspring Mall in Steinbach, Dauphin Marketing Place, Polo Park and St. Vital Centre with a total attendance of approximately 356,700.

Marketing support was also provided through the development of 35 brochures, factsheets, food posters, press releases and a special garden supplement in the Winnipeg Free Press. Other promotional items included U-Pick maps and a recipe brochure for the Manitoba Strawberry Growers' Association, a new wild rice brochure, the regular Manitoba Food Products Directory and a Fresh For Flavour Foundation calendar that supported coordination of promotions between wholesalers and retailers.

Marketing staff assisted with the formation of several new organizations, including a Manitoba Greenhouse Growers' Association, an export committee of the Manitoba Swine Breeders' Association, a Weanling Improvement Sales and Service Cooperative and a Northwest Swine Group.

Water Services

Community Water Service

The Agri-Water Branch, which is in the process of being amalgamated with The Manitoba Water Services Board, is responsible for the water related activities of farm water source development, community water source development, agricultural area water pipeline, agricultural community water and sewage systems and dugout filling.

Water Source Development

Technical assistance was provided on 68 projects. A total of $170, 966 in rebates was paid on 34 projects by Agri-Water to local governments for the development of water sources from which farmers and community residents may haul or pipe water.

Agricultural Area Water Pipeline

During the past year a total of $19,720 in rebates was paid on 2 pipeline projects installed, involving a total of 12 miles of pipeline to provide water to 1 community and 12 farmers and rural residents.

Agricultural Community Water & Sewage

Agri-Water provided technical assistance on 21 community projects during the past year. Rebates totalling $129,077 were provided to local authorities for 9 projects undertaken.

Agronomic, environmental and public health monitoring continued on the Roblin Effluent Irrigation system. The major monitoring contract is with the University of Manitoba with contributions being made by the Departments of Health, Environment and Agriculture.

Investigations on controlling emissions of dangerous sulfide gases in a sewage treatment plant were continued.

Perimeter tile drainage was installed around a lagoon where seepage was creating problems for the farmer.

On-Farm Water Service

Water Source Development

Technical assistance for farm water source development is available, as required, to solve serious water problems through farm calls and detailed designs. A total of 1,969 requests for technical assistance were dealt with, while financial assistance totalling $82,186 was provided to 92 farmers to assist in the development of satisfactory water sources which did not qualify for PFRA assistance.

Dugout Filling

Equipment rental charges to fill a normal size dugout were $300 for distances under ½ mile, and $350 for distances greater than ½ mile.

A total of 128 dugouts were filled during the year. There was a marked increase in the number of dugouts filled by commercial operations.

Together with commercial operations this program made a significant contribution in meeting the needs of water deficient farmsteads.

Livestock Management And Marketing

Dairy

Sales to the Manitoba Milk Producers' Marketing Board and provincial creameries reached 295.9 million litres, an increase of 0.17 percent from 1982/83. Fluid milk sales were 103.2 million litres, down 0.4 percent. Farm separated cream production increased 2.0 percent to 34.1 million litres milk equivalent. Industrial milk production remained basically unchanged at 158.6 million litres.

Farm Cash Receipts - Dairy farm cash receipts including subsidy payments totalled $117.66 million. Payments from the Manitoba Milk Producers' Marketing Board and the creameries reached $106.76 million, comprised of $102.14 million from milk sales and $4.62 million from farm separated cream sales. The price paid to milk producers rose from $40.04/hl in April 1983 to $43.25/hl in March 1984. Creamery payments for farm separated cream rose from $3.75 per kilogram in April 1983 to $4.03 per kilogram in March 1984.

Subsidy Payments - Subsidies are based on eligible market share quota shipments made within the dairy year. Manitoba Market Share Quota allotment increased to 6.559 million kilograms of butterfat as of January 1984. The subsidy remains unchanged at $6.03/hl for milk testing 3.5 percent butterfat. Support prices for butter and skim milk powder were increased to $4.55 and $2.72 per kilogram, respectively, on August 1, 1983. These increased to $4.71 and $2.79 per kilogram on April 1, 1984. Manitoba received $10.90 million in subsidy payments. However, in quota levies of $4.70/hl and $5.14/hl effective January 1, 1983 and August 1, 1983, respectively, and the 30.15 cents/hl skim off levy on Class I shipments resulted in a total deduction from milk producers of $7.80 million. A net subsidy payment of $3.1 million was realized. The over quota levy set on August 1, 1983 at $31.79 per kilogram was up from the $27.95 over quota levy set on January 1, 1983.

Breeding

Manitoba Agriculture supports two milk recording services, the Dairy Herd Improvement Association (DHIA) and the Owner Sampler (O/S) program to improve the production performance of dairy cattle in the province.

The "Production Dollar Index" (PDI) was again distributed semi-annually to all dairy producers. The report summarizes the most recent production and type information for all proven dairy bulls in Canadian studs. Presentations on sire selections and

TABLE 1
DHIA Herd Summary

Official DHIA	1982	1983
New Herds Qualifying	21	14
Discontinuing Herds	2	8
Herds Official at Year End	47	53

DHIA Summary (1982-1983)
(January 1 to December 31)

	1982	1983
Associations in operation	20	21
Herds on test for 12 months	207	248
New herds on test	60	27
Discontinued herds	16	14
Total herds on test during the year	282	289
Total herds on test on December 31	266	275
Cows on test on December 31	13,318	13,531
Average kilogram milk per cow	5,777	5,896
Average kilogram fat per cow	197	203
Average BCA milk per cow	123.0	125.0
Average BCA fat per cow	112.5	116.0
Composite BCA	117.75	120.5
Percent of herds on test	21.8	23.2

breeding programs were made at producer meetings, two AI courses and at two one day refresher AI courses.

Dairy Herd Improvement Associations (DHIA)

During the calendar year of 1983, the DHIA program continued to show growth in the twenty-one existing associations. The increase in membership consisted of 1 herd transferring from ROP, 6 herds transferred from Owner Sampler program, and 20 new herds for an increase of 27 herds on the program. Only 14 herds discontinued the program during the year, for a net gain of 13 herds and an active membership of 275 herds on test at year end.

The DHIA grant system of $2.00 per cow per year and 55 cents per herd mile, which is paid directly to the DHIA Associations, remained in effect. Producers continued to show interest in the official DHIA program with 14 new herds qualifying.

Annual meetings and record keeping workshops were held with all 21 associations along with several training workshops for the DHIA supervisors.

National Identification Program (NIP)

Producers continued to positively identify some of their grade animals. Numbers of animals identified since the program started are as follows:

1978 - 1,713	1981 - 2,587
1979 - 1,535	1982 - 2,796
1980 - 1,834	1983 - 3,605

TABLE 2
Owner Sampler Summary (1982-1983)

	1982	1983
Herds on test for 12 months	84	87
New herds on test	23	27
Discontinued herds	35	22
Total herds on test during the year	139	131
Herds on test December 31	104	109
Cows on test December 31	4,512	4,603
Average kilogram milk per cow	5,481	5,498
Average kilogram fat per cow	191	187
Average BCA milk	117.5	112.5
Average BCA fat	109.3	102.1
Composite BCA	113.4	107.2
Percent of herds on test	8.5	9.2

Owner Sampler

The Owner Sampler (O/S) program increased by 5 herds, and also showed increases in the number of cows and production per cow. Six herds transferred to the DHIA program during the year.

Nutrition

Over 30 percent of the province's dairy producers requested feed analyses and detailed feed recommendations. A series of nutrition workshops emphasizing feeding for production and ration balancing were held. Feeding and management of dairy bull calves for pink veal production was studied in cooperation with a number of producers. Holstein clubs, in conjunction with the 100th anniversary of Holstein Canada celebration held a number of barn clinics, meetings and tours covering all areas of dairy management.

The butterfat-protein inversion program was continued. Herd owners were informed on how to correct butterfat problems when they occur.

Marketing Dairy Breeding Stock

Market development work was underway with the Manitoba Jersey Association, the Manitoba Holstein Association and private exporters and was directed at Canada's major traders, the United States and Mexico. Although our numbers are small compared to Ontario and Quebec, Manitoba's dairy breeding stock ranks among the leaders in performance and type in Canada.

South Korea and Iran are becoming prominent importers of Canadian dairy stock purchasing 23 percent and 5 percent, respectively, of Canada's total exports in 1983. United Sates imported 13,165 head of dairy cattle or 56 percent of Canadian total sales in 1983.

Dairy Laboratory

Microbiology — Producer samples and processed dairy products are tested for total bacteria counts, coliform counts and bacterial inhibitors (antibiotics). Tests for added water in raw and finished products are also performed.

For the year 22,500 total bacteria counts, 5,400 coliform counts, 242,000 tests for inhibitors and 17,800 tests for added water were made. Yeast, mould and proteolytic counts on butter, keeping quality tests and phosphatase tests on fluid milk products and staphyloccoccus counts on cheese were conducted. In total 93,100 analyses were completed.

Milk Composition — Output in this area increased again this year. The main increase was in the DHIA and Owner Sampler area. This once again more than offsets the decline in producer payment samples that continue to be analysed weekly for milk-fat, protein and lactose. Analysis of all individual cow samples submitted under the Owner Sampler and DHIA programs were conducted monthly. Analysis of processed dairy products were conducted once weekly. In total 222,400 analyses were performed.

Chemistry — Manitoba Agriculture's program of monitoring herd samples for somatic cell levels, to aid in the detection of mastitis, continued. Compositional analysis of various processed products were performed and evaluations of flavor problems in both raw milk and finished dairy products took place. In all, 17,000 analyses were conducted. In addition, 240 litres of 1/10N NaOH, 20 litres indicator and 3 litres .088N AgNO3 were prepared and standardized for use by the dairy plants.

Processor Services

Inspections of Manitoba's dairy plants and depots took place under this activity. In-depth inspections on industrial plants were conducted in conjunction with Agriculture Canada while inspections of fluid plants were conducted by Manitoba Agriculture. Follow-up inspections were made where necessary. Four hundred and four plant and depot inspections were completed.

Including seminars and meetings, 240 calls were made to plants regarding product quality. There were 2,804 tests for quality and composition of farm separated cream, and 31 bulk wash-up station evaluations conducted. Inspections were made of 10 margarine storage facilities and one margarine manufacturing facility. Random sampling and testing of 24 samples of margarine were conducted. Eighteen consumer complaints were received, with 12 plant contacts or visits resulting.

Approximately 8,300 litres of contaminated dairy products were recalled. Four issues of the Dairy Section newsletter, "The Clarifier" were published and distributed to processors.

Farm and Extension Service

As of March 31, 1984 there were 1,183 milk producers in Manitoba, 34 less than March 31, 1983. Average monthly shipments for this period were 18,198 litres compared to 17,764 litres for the year previous, 2,973 farm visits were made, 995 were a direct service to producers and 1,978 were routine, including visits to new producers and on-farm extension calls. Eighty percent of cow count figures have been collected and recorded while doing farm visits.

Owner Sampler routes from two areas in the Province are picked up 10 times per year by Farm Services inspectors. Inspections and/or appraisals totalling 257 were conducted on milk transports, milk graders and raw milk sample holding facilities.

The annual 3 day milk graders course, along with the 4 day milk receivers course were held in November with a total of 12 individuals in attendance. All were successful in passing the courses and licenses were issued accordingly. Refresher courses were held in Winnipeg and Brandon for all presently licensed drivers. Staff attendance and/or participation in regional, DHIA, Manpower and Holstein Friesian Association meetings with dairy producers served to assist in the continued good quality of milk delivered to processing plants. Discussions on milking equipment, sanitation and testing related to mastitis control has helped to lower somatic cell counts for some producers.

In the extension realm all five regions carried out an on-going program with regional dairy producers. The wide range of activities included production meetings, dairy days, dairy barn tours, demonstrations and A.I. refresher courses. Topics dealt with at these events included nutrition, sire selection, heifer selection, use of A.I., dairy facilities, disease control, use of records and other topics. A new semi-intensive on-farm dairy consultation program was developed and carried out successfully in the Central region. This program involved agricultural representatives, farm management specialists, animal industry staff and others from the private sector.

Dairy Goats

Four dairy goat producers were enrolled in an "official" group testing Owner Sampler milk recording program. The program is administered provincially in cooperation with the Canadian Goat Society and Macdonald College, Quebec.

The Sou Westers Goat Association was organized during the year. The East-Man and Sou Westers Associations carried out a number of meetings on nutrition, breeding and milk processing. The newsletters "Capri-Lines" was printed and distributed to goat producers on a quarterly basis.

Beef

The beef cattle industry is an important part of Manitoba's agricultural sector, with farm cash receipts representing 45 percent of the total livestock sector, and 16 percent of the total farm cash income. Most regions report that difficult economic times have prompted many beef producers to take steps to improve their efficiency. A large number of producers enrolled in the Manitoba Beef Stabilization program in an attempt to stabilize their cash flow.

Beef producers include dairy operators, cow-calf operators, cow-calf and feedlot operators or feedlot operators. Of Manitoba's 14,000 beef producers, 24 percent are fluid milk or cream shipping operations, 41 percent are cow-calf operators, 34 percent are cow-calf and feedlot operations and one percent feedlot operations.

Nutrition

Approximately 650 detailed feed recommendations based on 1,650 feed sample analyses were prepared and sent to beef producers. In addition, follow-up services including farm calls were supplied in response to producer requests.

Breeding

Total efficiency of beef production is very important to producers faced with the present high costs of production. Breeding programs are aimed at increasing total efficiency through genetic improvement and use of current technical information.

Federal-Provincial Record of Performance (ROP)

This program is used by producers as a within-herd evaluation of animal performance. Manitoba Agriculture assists with record coordination, weighing assistance, and farm application of results.

TABLE 3
Number Of Herds And Recorded Weaning Weights (W/W) And Yearling Weights (YW) For 1979-1983

Year	Herds	WW	YW
1979	385	14,027	11,053
1980	428	15,621	10,980
1981	375	14,923	10,135
1982	451	18,997	11,206
1983	436	17,933	11,529

Progeny Proving Program (PPP)

PPP is intended to improve the genetic performance in Manitoba beef herds by selecting the top gaining bulls out of Manitoba's bull test stations and offering semen from the bulls to cooperating herds.

The superior bulls are identified for future use in artificial breeding. As a result, artificial insemination in beef herds has increased. Semen from PPP bulls is also being used at the Douglas Heifer Project and the Marco Grassland Association. Progeny proofs on PPP test sires and obtained through the National Sire Monitoring Program have been very favourable. The majority of bulls have been plus proven for both weaning and yearling weights (see Table 4). Currently three hereford bulls selected through PPP are nationally ranked in the top 10 percent of their breed for weaning weight.

Sons of the test bulls returning to the Manitoba Bull Test Station are exhibiting superior gains. In 1983 they indexed 6 percent higher for average daily gain and 2 percent higher for weight per day of age. Daughters of test sires are also weaning heavier than average calves.

TABLE 4
Summary Of The Progeny Proving Program (PPP)
1979-1983

Number of bulls selected	31
Number of bulls obtaining proofs	22
Number of bulls plus proven for weaning weight	14
Number of bulls plus proven for yearling weight	15
Number of bulls plus proven for both	13

In 1983, 31 herds and 843 cows were enrolled in PPP. Three new bulls were selected for the program.

Bull Test Stations

The popularity of station testing continues with the establishment of Manitoba's seventh facility in Gunton in 1983. A total of 974 bulls began test, including 35 from the Blonde d'Aquitaine, 555 from the Manitoba Bull Test Station, 142 from Gunton, 45 from the Limousin, 41 from the Maine-Anjou, 83 from the Northwest and 73 from Red Power.

Those bulls superior in (growth) performance which also met reproductive standards were offered for sale. A total of 399 superior bulls were sold from all stations. Most of these bulls were purchased by Manitoba breeders and will ultimately improve growth potential in their herds.

Manitoba Agriculture encouraged consignors to provide home test data through a $50 per bull incentive grant. This information was available to potential buyers to enable them to assess the genetic worth of the young sires with greater accuracy. A total of 579 bulls qualified at eligible stations, and $28,900.00 was awarded to the contributors of these bulls.

Awards Program

The Beef ROP Awards program was initiated to recognize outstanding achievement of individual beef producers. The 1983 awards were presented to Neil Moffat, La Riviere, a commercial cattle producer, and Donn Mitchell, Douglas, a purebred cattle producer. These producers demonstrated the effective use of production and performance records in achieving their breeding goals.

Marketing-Beef Breeding Stock

Marketing and promotional assistance is provided to Manitoba Beef Cattle Associations and private exporters on a continuing basis.

A Manitoba/Mexico Trade Agreement was approved by the Manitoba Minister of Agriculture and the Manitoba Attorney General's Department which would facilitate livestock selection and purchasing procedures. It was presented to the Banco National de Credito Rural (Banrural) administration for consideration and signature.

A marketing officer accompanied 12 pre-sold beef breeding stock animals to a large Livestock Show in Chihuahua, Mexico. These animals were on display in the Manitoba Agriculture booth and attracted a great deal of attention with sale prospects looking positive for next year.

A new brochure was prepared for the Manitoba Limousin Association and the breeding stock marketing section for the Department's Beef '85 homestudy course was prepared by Marketing staff.

Branding

Manitoba Cattlemen have become increasingly concerned about cattle theft and other cattle losses. Branding reduces the incidence of theft, and increases the chances of missing animals being returned. The return of one animal more than covers the costs of many years of branding and registration fees.

During the year, 292 new brands were registered to bring the total registered cattle and horse brands in Manitoba to 3,602. A biennial Register of Brands book was printed.

Extension

Most regions report some increase in on-farm finishing in response to the Manitoba Beef Commission program. This trend has influenced the type of extension activities requested. Interest in beef producer meetings, seminars, tours, demonstrations and individual consultations remained high across the province. Major topics dealt with included nutrition, herd management, genetics, housing and

handling facilities, marketing, grading, herd health, evaluating finish, freeze branding and feedlot trial results.

Producer groups have been found to be excellent vehicles for delivery of both livestock and forage programs. Examples of these organizations are the Eastern Grassland Society and the Stuartburn-Piney Agricultural Development Association (SPADA) in the Eastern Region.

There is an increased interest in pregnancy checking. One of the most successful projects in this regard was carried out in the Ashern district where 2,800 cows were checked. This was part of a total herd management consultation procedure and was found to be most effective for the producers involved.

Agro-Man

An Agro-Man feedlot project was carried out at Rossburn involving 96 steers from 22 contributors. On each of the four weighing dates mini-field days were held for producers and three additional field days were held on the site to inform the public on project results.

A heifer project at Douglas demonstrated proven livestock management practices in the feeding and breeding of yearling beef heifers. Some 98 heifers from 25 contributors were involved and two field days were held for producers.

The SPADA Agro-Man feedlot project included 15 producers who contributed a total of 60 steers. Emphasis was placed on use of locally produced feeds and low cost facilities. Three meetings and three newsletters resulted from this project.

An Interlake beef heifer growing and crossbreeding Agro-Man project involving 160 heifers, demonstrated a number of factors affecting growth, calving rate, selection of sire, birth rate and rate of gain. Associated with this project was a trace mineral research program and a fly control demonstration.

Another Interlake Agro-Man project involved a calf to finish program. One hundred calves from 20 producers were used to demonstrate custom feeding, feedlot management and marketing. Each producer involved had an opportunity to examine his own breeding program in relation to the production of feedlot animals. Much of the resulting information from this program was useful as extension teaching material on on-farm finishing.

The Interlake Beef Cattle Improvement Association's bull test station program involved 142 bulls from 48 breeders. Seventy-two of the bulls qualified for sale eligibility. The region was encouraged by the fact that 75 percent of the bulls sold remained in the Interlake.

Hogs

The hog industry plays an integral role in Manitoba's agricultural economy. In 1983, farm cash receipts from hog sales decreased 8.0 percent to 155.4 million dollars or 8.9 percent of total farm cash income, as a direct result of lower market prices. The 100 index price F.O.B. Winnipeg averaged $68.49 per cwt. or down 15.0 percent from the record high in 1982. Hog marketings totalled 1,294,741 head, a 7.3 percent growth from the previous year and continuing a consistent growth pattern since 1976. The 8.2 percent increase in inspected hog slaughter in Manitoba led all other provinces for the year. The number of registered producers shipping hogs to the Manitoba Hog Producers' Marketing Board increased marginally (2.2 percent) to 3,271 production units.

Provincial programs and extension activities are aimed at strengthening the managerial capacity and economic returns of Manitoba swine producers. Emphasis is placed on improving genetic performance, sow productivity, feed efficiency and carcass qualify, and also providing farmers with current technical information.

Nutrition

The Provincial Feed Testing Laboratory analyzed approximately 900 feed samples for swine producers. Three hundred and seventy comprehensive ration and feeding recommendations were forwarded and follow-up farm calls were made upon request.

Breeding

Manitoba Agriculture offers two swine performance testing programs, the Federal-Provincial Record of Performance (ROP) and the Commercial Hog Improvement Program (CHIP) to improve breeding stock quality, total herd efficiency, and market grades.

The most noticeable improvement was in carcass quality of Manitoba raised hogs. The percentage of hog carcasses indexing 102 or better, increased 5.9 percent to 73.2 percent in 1983. This marked the first time Manitoba's performance surpassed the National average (70.6 percent) and ranked second only to the Atlantic provinces.

Federal-Provincial Record Of Performance (ROP)

Manitoba purebred swine producers evaluated 5,241 animals under the home test and 195 young boars at

TABLE 5
Swine ROP (Record of Performance) Summary 1980-1983

Year	No. of Animals	Adjusted Age to 90 kilograms (Days)	Adjusted Backfat to 90 kilograms (mm)	Average Dairy Gain (kg)	Feed Conservation (kilogram feed/ kilogram gain)
MALES STATION TEST (ROP Boar Test Station, Brandon)					
1980	321	149.2	14.8	0.87	2.48
1981	309	151.6	13.8	0.87	2.53
1982	166	151.4	13.9	0.86	2.43
1983	195	153.2	13.1	0.85	2.57
MALES HOME TEST					
1980	1735	172.9	15.7		
1981	1496	169.2	13.5		
1982	1697	170.0	12.9		
1983	1906	167.0	12.8		
FEMALES HOME TEST					
1980	2826	182.6	17.0		
1981	2812	181.5	15.2		
1982	2540	175.7	14.9		
1983	3335	178.6	14.9		

the Brandon test station (Table 5). ROP technician workshops and Provincial Advisory Committee meetings were held throughout the year.

Commercial Hog Improvement Program (CHIP)

CHIP offers both performance testing of replacement animals, as well as record keeping program for commercial producers.

Participants were provided with an ultrasonic backfat probe service and various record keeping materials and forms, including ear notchers, farrowing calculators, individual sow charts, sow herd record booklets and factsheets on record keeping. Besides assisting new producers in establishing a record keeping system and interpreting performance information, staff advised on other management practices and new developments in the swine industry.

During the year, 998 gilts in 28 herds were tested. CHIP herds continued their dominant role in provincial market hog quality by marketing over ten percent more hogs in the 102 index or higher category than the provincial average. This was similar to their advantage achieved in previous years (Table 6).

Swine Artificial Insemination

Training schools were held in the Arborg and Dugald areas. The courses offered training and education in reproductive physiology, heat detection, proper time of insemination, insemination technique, semen handling and sire selection. Staff also assisted producers with semen delivery and on-farm inseminations.

Extension Activities

The Department again supported Hog Days, sponsored a province-wide swine seminar and continued the factsheet distribution service. Other activities included commodity group workshops, on-farm consultations, farrowing schools and provision of technical information through factsheets, bulletins, news releases, training aids and other related publications. A new quarterly newsletter "Manitoba Swine Update" was published and distributed to all Manitoba swine producers. Liaison was maintained and discussions held with agri-business, producer groups and research institutions.

TABLE 6
Quality of CHIP and Manitoba Hogs (1980-1983)

Percent of Hogs Indexing 102 or Better

Year	CHIP Average	Manitoba Average	Difference
1980	73.7	59.1	14.6
1981	78.6	65.8	12.8
1982	78.0	67.3	10.7
1983	86.0	73.2	12.8

Several of the regions report the hog industry is going through an encouraging development with many young producers becoming involved. Many producers are showing a keen interest in department extension efforts designed to help them achieve optimum performance from their herd.

Manitoba Hog Day

Manitoba Hog Days is the largest swine extension event held in the province and alternates between Winnipeg and Brandon. Activities include producer seminars and a large exhibition hall of commercial displays. Nearly 1,000 people attended the 1983 meeting in Brandon.

Swine Factsheet Service

Subscribers to the service receive factsheets and other publications containing the latest information on swine production and management techniques. Publications issued during the year included eight new or revised factsheets on ROP, nutrition, herd management and general references, one annual report and three swine budgets. Over 900 individuals subscribe to the service, reflecting the strong producer interest in this type of extension medium. As well, complimentary subscriptions are given to all swine 4-H club members and leaders.

The Weanling Improvement sales and Services Co-operative Ltd. (WISSCO) was established in January to develop an organized method of marketing weanling pigs in the province; one that would benefit both weanling producers and feeder pig operators. Start up grants were provided by Manitoba Agriculture and the Manitoba Hog Producers' Marketing Board.

Marketing-Swine Breeding Stock

International market investigations and strategies for marketing Manitoba swine breeding stock were continued with emphasis on Canada's record of high quality and excellent herd health.

The 20-foot "Manitoba Hog Industry" display was used for the American Pork Congress in Kansas City where 15 top animals were sold and 250 contacts made.

Sale of Manitoba purebred stock to Japan was supported by the Minister of Agriculture's mission to Japan and the participation of the chairman of the export committee of the Manitoba Swine Breeders' Association in a further mission to Japan and China. An incoming Japanese swine buying mission to Manitoba resulted in the sale of a group of gilts and a boar. In cooperation with the Manitoba Swine Breeders' Association, a full color Manitoba swine brochure in English, Spanish and Japanese was prepared and distributed overseas.

Support was provided for the first R.O.P. Test Station Video Boar Sale at Brandon which was designed primarily to familiarize purebred breeders with electronic marketing and to give a greater number of commercial buyers more exposure. Weanling producers were assisted in the formation of a Weanling Improvement Sales and Service Co-operative Ltd. (W.I.S.S.C.O.) to provide better quality weanlings (feeder unit hogs) which would in turn produce better returns to the farrowing unit.

Marketing-Pork

In 1983, Manitoba's 3,200 commercial hog production units marketed 1.4 million slaughter hogs. Manitoba pork exports accounted for over 19 million pounds or about 5 percent of total Canadian exports. Approximately 65 percent of the hogs, live and slaughtered in 1983 in Manitoba were sent out of the province to U.S.A., Japan, Caribbean and other provinces.

The Department's market goals are to increase exports of pork and pork products, primarily to the

United States, Japan and Hong Kong. Staff work closely with the Canada Safeway Export Development Department in Edmonton to reach their American supermarkets. Sales to the United States and Japan in 1983 amounted to over $10 million from all provincial sources.

Incoming pork buyers missions included three from the United States and one each from Japan, Mexico and Algeria. Outgoing missions were arranged and conducted in cooperation with the Manitoba Hog Producers' Marketing Board to California, Washington State and Oregon.

The export of Manitoba pork continued to be promoted by the Minister of Agriculture's mission to Japan, the distribution of the new multi-language brochure, inspection procedure studies to facilitate shipments and an on-going testing of new pork products, cuts and packaging by local processors for specific markets.

Sheep

Interest and activity in the sheep industry remained strong though livestock returns tended to discourage new producers and affected planned flock expansion. These low returns are also felt to be responsible for the cancellation of the All-Canada Sheep Classic traditionally held in Brandon. The Manitoba Sheep Association and the six affiliated regional associations continued to be active in representing producer interests, particularly in areas of extension and market development.

Nutrition

Numerous feed samples from producers were analysed at the Provincial Feed Testing Laboratory, and feeding recommendations were made. Recommendations were followed by farm visits upon producer request.

Breeding

In 1983, the number of lambs enrolled in the Federal/Provincial Sheep Record of Performance program decreased from the previous year to 1,438 head, but the number of producers enrolled remained substantially the same at twelve. R.O.P. data flow is coordinated by Manitoba Agriculture staff and extension work is carried out with producers based on the results. The current program has short-comings, but a field trial utilizing direct access through the Agriculture Canada terminal in Winnipeg produced excellent results. This was done in preparation for the new R.O.P. program for sheep expected to be in place by the fall of 1985.

Extension

Producers of all levels of expertise were addressed at the Annual Sheep Seminar. A "back-to-the-basics" session was held for newer producers and established producers attended an intensive session on modern breeding technology.

The predator taste aversion project was expanded through the province and bait-making workshops were held in the Dauphin and Lundar areas. Other extension meetings and field days emphasized rotational grazing, electric fencing (both as part of Agro-Man projects), feeder design, nutrition, taste aversion and lambing problems. Farm calls continue to be a priority of Manitoba Agriculture staff and the publication of "Sheep Sense", the industry newsletter provides interested producers with important industry information.

Marketing

Slaughter numbers at federally and provincially inspected plants in Manitoba increased by 21 percent (9,130 head in 1982 to 11,073 head in 1983) and again, numbers marketed through public stockyards decreased slightly.

Lamb marketing continues to be a major concern of Manitoba producers. The Lamb Marketing Study, initiated in cooperation with the Manitoba Sheep Association clearly indicated factors inhibiting lamb market development. Initial work on solving these problems lead to the first steps in the developing of a producer organization to handle lamb marketing in the province.

Departmental staff continue to assist in marketing plans and the promotion of sheep products, a major activity of the Manitoba Sheep Association at fairs and in shopping malls.

Poultry

Poultry activities and regulations were designed to meet these objectives:

- Providing services directed at improving production and economic returns to individuals or groups within the poultry industry by offering management techniques and other assistance.
- Maintaining quality standards for marketing eggs and poultry as prescribed under the Livestock and Livestock Products Act.
- Control of pullorum, typhoid and other diseases in poultry flocks through the hatchery and hatchery supply flock regulations.
- Improving the availability and acceptance of new production technology for hatcheries and hatchery supply flocks.

Nutrition

Recommendations on 365 feed samples were prepared. In addition, nutritional information involving ration recommendations was supplied in response to requests from producers and feed manufacturers.

Breeding

Broiler breeder operations were assisted by the distribution of a Record of Performance book. Assistance was provided on the use of the book. Records from 18 flocks were processed, summarized and presented to participating producers. News bulletins were issued covering areas of concern to breeders such as light control, management, disease and feeding.

Manitoba Agriculture conducts a hatchery monitoring project which involves a thorough examination of hatcheries and eggs in hatcheries. The effectiveness of sanitary procedures of both the hatchery and hatchery supply flock are assessed so that diseases may be detected and treated. Seven hundred microbial plates were taken on site and interpretation of results rendered.

Provision was made so that hatcheries could, if they so desired, carry out a self-monitoring program using the microbial plates. Two hatcheries made use of this offer and used 235 plates at the hatchery level. Hatchery monitoring for breeder flock evaluation whereby hatches or portions are examined in detail was expanded during the year.

There was increased demand for advisory work with hatcheries this year. Advice on management, operation and sanitation was provided in detail to three hatcheries.

The Department continued to offer owners of turkey breeding flocks the opportunity to have their turkey toms graded through the collection and examination of turkey semen. This process allows the selection of toms with the greatest fertilizing capacity and the culling of those of poor breeding quality. Management suggestions accompany participation in this activity. Four flocks were graded totalling 1,409 toms.

Building and Materials Handling

Staff supplied information on ventilation requirements, light control and building design including efficient feeding, handling and housing facilities.

Systems for weighing birds were demonstrated and feed intake control systems scrutinized.

Poultry Health (Regulatory)

Application of the regulations under The Livestock and Livestock Products Act involved pullorum-typhoid testing of all hatchery supply flocks and the inspection of premises. Regulations require that all hatcheries with a 1,000 egg setting capacity or greater be licensed by the department. In addition to the pullorum test, turkeys are tested on the basis of a 10 percent whole blood sample for P.P.L.O. and Salmonella typhimurium. Samples of blood are taken from all chicken breeding flocks and these are tested for Mycoplasma gallisepticum, Mycoplasma synoviae and Infectious Bursal Disease. All turkey breeder flocks are tested periodically to maintain a Mycoplasma meleagridis free status.

TABLE 7
Hatchery Supply Flock Statistics — Manitoba

April 1, 1983 — March 31, 1984

Flock Type	Number of Flocks	Female Birds
Broilers	40	113,035
Layers	15	54,591
Dual Purpose	25	14,770
Turkey	16	30,316
	96	212,712

Disease and Insect Control

Mycoplasma gallisepticum and Mycoplasma synoviae continued to be of concern and a testing program to evaluate their status in broiler breeder flocks are conducted. Infectious Bursal Disease and its effects is another important problem against which breeder flock owners are being encouraged to vaccinate. Mycoplasma meleagridis free status is the aim of turkey breeders. The third year of a program of testing was carried out.

Collection of data concerning Salmonella in turkey breeder flocks continued and involved collecting litter samples for analysis.

Marketing

Manitoba produces 4.23 percent of the Canadian chicken quota and 8 percent of the turkey quota allocation. In 1983, 119 chicken producers sold 14 864 000 kilograms of eviscerated birds which were consumed in Manitoba. Eighty-one turkey producers sold 7 432 000 kilograms of eviscerated turkey — 60 percent remained for local consumption. Six processing plants serve the poultry industry. They are located in Winnipeg, Steinbach, Blumenort and Morden.

Liaison was maintained with the poultry marketing boards and with commercial processing companies. There appears to be a growing demand for chicken and because Manitoba has one of the lowest costs of production in the country, producers are being encouraged to develop flocks for this market. Manitoba has applied for quota for at least ten new producers from the National allocation.

For the past six years the Department has been involved in introducing, shipping samples and promoting Manitoba turkey meat to Japanese customers. Futher development work has been carried out through the P.E.M.D. Food Program of the Department of Industry, Trade and Commerce, in cooperation with the Manitoba Turkey Marketing Board. This year a "Manitoba Turkey" promotion was carried out in Japan involving cooking demonstrations, recipes developed for Japanese tastes and Manitoba turkey promotions in over 100 Japanese stores with Manitoba supplied in-store banners. The December 1983 Ministerial mission took park in this promotion in Japan.

To supply a specific sized turkey demanded by Japanese customers, a test flock of turkey broilers was raised in the past year, under controlled conditions. If successful, this program will be expanded. Shipments of frozen turkey boilers, de-boned turkey meat and frozen chicken worth approximately $138,000 were shipped to Japan in 1983.

Marketing staff assisted the two Manitoba goose plants in marketing geese and geese products to the United States, Germany and Hong Kong in 1983.

Department liaison was maintained with all poultry marketing boards as well as with commercial companies such as egg grading stations and processing plants.

Licensing

The Department continued to administer regulations respecting poultry and poultry products under The Livestock and Livestock Products Act. These regulations require the licensing of poultry dealers. In this regard, 30 licenses and 17 branch licenses were processed. In addition, 19 hatcheries were also licensed.

Engineering Activities — Livestock

This year department engineering staff provided a major thrust on improving environmental controls for confined livestock housing. Over 60 on-farm ventilation problems were investigated and solutions proposed and to gain additional factual performance data on actual systems, 50 fan tests were made in eight different barns. Because of a growing interest in heat exchangers reliable data was obtained by carrying out 40 heat exchanger tests on 12 different units. In addition, assistance was provided to manufacturers in the design of heat exchangers and the development of ventilation system controllers for livestock barns.

Tours of livestock facilities were held to familiarize staff and farmers with new developments in environmental control and functional design. Staff engineers were involved in evaluating and revising plans under the Canada Plan Service and distributed 1452 CPS plans in Manitoba. An additional 223 Manitoba Agriculture plans were distributed and 18 new standard plans and 67 individual plans were developed during the year.

Specifically in the swine area, engineers were involved in producer meetings, the Saskatchewan Swine Symposium, VIDO meeting and activities and the development of publications on swine farrowing facilities.

In other livestock related activities, engineering staff provided information to farm lenders, building contractors, the Clean Environment Commission, rural municipalities and equipment manufacturers.

Feed Testing Laboratory

The Feed Analysis Laboratory serves the Manitoba livestock industry by assisting livestock operations through improved nutritional programs for farm

animals. The laboratory analyses feed samples submitted by livestock producers, feed companies, department staff and others. Chemical analyses are forwarded to nutritionists for interpretation and comment.

For the year, the laboratory analyzed 654 samples of grain, 1,616 forage samples, 553 complete feeds and 3,639 unclassified samples for a total of 6,462 samples. These samples were tested by 21,882 analyses.

In addition to feed testing activity, program direction was provided to an Agro-Man Trace Mineral Project involving studies in animal, plant and soil areas.

Animal Nutritional Services

This service ensures that producers and owners of all species of animals have available the most up-to-date technical information on nutrition and nutritional practices. Detailed and readily interpreted feeding recommendations are provided in response to results of feed analysis.

Modern, efficient nutritional practices to support farmers in maximizing their returns are recommended. Preventative management and humane treatment of animals is encouraged. For the year, approximately 1,600 feeding recommendations were made based on 3,600 feeds tested. A rapidly increasing percentage of producers are recognizing the value of using this nutritional service in developing their feeding program. The service this year has been especially popular with dairy and swine producers. On a commodity basis, recommendations made were: beef 42 percent, dairy 30 percent, swine 26 percent, and horses, goats and sheep 2 percent.

In addition to written recommendations, nutritional information is disseminated via on-farm consultations, commodity group workshops, the media, and local and regional meetings.

Veterinary Services

The Veterinary Services Branch develops and administers the programs and activities which are proven necessary to assure rural and urban Manitobans ready access to competent veterinary services. Adequate veterinary care for the livestock industry is considered an important factor in the overall Manitoba economy. Activities are designed to assure the Manitoba livestock industry of such service.

Western College of Veterinary Medicine

The Western College of Veterinary Medicine was founded in 1965 as a 4 western province venture to satisfy the long-standing western needs for veterinary training. Canada and Saskatchewan provided the capital funding while Manitoba, Saskatchewan, Alberta and British Columbia agreed to share net "after federal" operating costs on an annual resident student basis. These now exceed $10,000 per student per year. Student quotas were assigned in accordance with the respective provincial livestock populations. Of the present 70 student enrollment, Manitoba's quota is 12.

Veterinary Science Scholarship Fund

This activity was introduced in 1946 to counteract a flagging interest in veterinary medicine, to assist Manitoba students in their four years of study away from home and to encourage their return to rural Manitoba practice. One-fifth of their total scholarship is written off for each year of home province service. Scholarships of up to $750 per year have remained unchanged since 1971.

Veterinary Student Summer Employment

Manitoba students must go out of province for the latter four of their six year university course. This four year separation tends to break their home ties with Manitoba, unless they are brought back for their summer recess each year.

The veterinary student summer employment activity attempts to maintain their home preferences, intersperse each of their academic years with 4 months of practical training appropriate for their academic level and favourably impress them with the satisfactions to be gained from rural Manitoba service.

Summer employment has proven a most effective method of preparing students for rural practice and recruiting those well suited to rural Manitoba practice.

Veterinary Services Act

In 1970 amendments to the Veterinary Services Act provided additional grants for the establishment of public animal hospitals, with the proviso that once a hospital was established the municipalities would cost share its ongoing maintenance and operation.

Municipalities responded promptly and positively, resulting in over 30 such units now in operation. To meet increasing dollar support brought about by inflation, matching provincial grants were increased in 1981 and again in 1982, and now stand at $10,000 per district.

Veterinary Drug Distribution Centre

The Manitoba Veterinary Drug Centre was instituted in 1974 to give Manitoba veterinarians access to volume buying power. In addition, it provides them with stability of income and professional contact through competitive merchandising, while utilizing their expertise to correct growing and oftentimes serious misuse of veterinary drugs.

The price reduction in veterinary drugs sold to Manitoba farmers through veterinary outlets has exceeded 1M dollars in each of the last four years. A similar amount has accrued as profit to the veterinarians and greatly lessened their need for public subsidization and for higher professional fees. All direct operating costs of the Veterinary Drug Distribution Centre are recovered.

Humane Treatment of Animals

The Animal Diseases Act now classes livestock deprived of normal feed and care as "diseased" and thereby subject to veterinary direction authorized under the Act. This enables veterinarians to be involved from the outset in such cases, provides local response to complaints and facilitates rapid corrective action. A highly cooperative working arrangement with the RCMP has been established in handling about 30 cases per year. Of these about half prove unfounded, many respond well to veterinary direction and only a few require court action.

Manitoba Semen Distribution Centre

Artificial insemination has proven to be one of the most effective means ever developed to improve livestock, but Manitoba has too few to sustain a modern full scale producing stud and is caused by economic limitations to rely on imported semen.

The Manitoba Semen Distribution Centre attempts to gain the best of both worlds, by making available high quality semen from genetically proven bulls wherever located, without the cost of owning and keeping them.

Semen is purchased from other provinces, U.S.A. and overseas, in sufficient volume to meet Manitoba's demand and to assure Manitoba livestockmen of their choice at a reasonable price. Sufficient discount is attained on the volumes purchased to fully recover the operation costs of the Centre.

Field and Extension Services

Disease investigations and consultations with practitioners are an important part of the Field Veterinarian's activities. Fourteen such investigations were carried out last year in addition to numerous telephone inquiries and consultation.

Regular meetings with Veterinary Services District Boards have become a very important part of the Chief Field Veterinarian's duties. The large majority of boards welcome such outside guidance.

The demand for extension services in the form of lectures and courses in animal health matters continues to be greater than the Branch's ability to meet it. The one day and three day animal health courses, in particular, are extremely popular. Factsheets, contributions to "Intercom" and participation in Animal Industry's Beef '85 homestudy course, as well as consultation with other Departmental personnel in extension matters, accounted for much of the Field Veterinarian's time in 1983.

Provincial Veterinary Laboratory Services

The Veterinary Medical Laboratory is a major reference centre specializing in the diagnosis of all diseases which may affect the varied species of animals in Manitoba. It is designed to supplement and strengthen the service of veterinary practitioners and to provide the expertise that is not possible within the private means of the livestock industry. The laboratory also monitors all serious animal diseases, and in particular, animal diseases which are readily transmissible to humans. The service also provides the warning and the means to effect control measures where indicated. It serves veterinarians, livestock producers, agriculturists and other departments of government.

The year 1983 saw record numbers of accessions arrive at the diagnostic laboratory. The cumulative total reach 10,345, surpassing the previous high of 10,140 in 1976.

In cattle, Bovine Virus Diarrhea caused increasing problems. The number of cases more than doubled (to 75) with many verbal reports of problem herds in the field. Thromboembolic meningoencephalitis cases increased by 30% to 39. In neonatal diarrhea, cryptosporidium, continues to show up, with no effective treatment as yet.

In pigs, TGE activity was more prevalent with 50% more cases seen at the lab (32). Coccidicsis continues to be a problem in piglets during the first week of life. Increased case numbers of Swine Dysentery (combined Treponema and Campylobacter diagnoses) were encountered during the year. Pneumonia in feeder pigs was also on the increase.

Testing of mink operations began in 1983 to assist owners in eradicating Aleutian disease. The

diagnoses reported are serologic positives which are presumably pelted.

Western Equine Encephalitis occurred in 1983. A total of 46 equine serum samples were submitted - 23 were positive. The province conducted a mosquito adulticiding program amid much controversy, using malathion as the insecticide.

In 1983, requests for diagnostic service related to the avian species were 1,008. These cases entailed necropsies and related work on 3,865 specimens.

One of the most severe poultry situations occurred when an outbreak of Rhinotracheitis hit turkey poults. This severe respiratory condition caused mortality of 4% to 48% in infected flocks. Mortality totalled 26% of birds on farm. Treatment was unsuccessful and appeared to increase the mortality rate. The course of the disease was about six weeks and recovered flocks were marketed about one week past the usual date.

New tests and procedures introduced during the year included a new test for Aleutian Disease in mink and a time/motion work study that showed all procedures carried out in the laboratory were well over the 100% efficiency level.

TABLE 8
1983 Summary of Technical Operations

Total Accessions Received	10,345
Individual Test Procedures	117,226

INDIVIDUAL TEST PROCEDURES — DETAILS

		1983	1982	%Change
Biochemistry	(BCH)	27,043	19,872	(+ 36)
Hematology	(HMT)	6,364	5,803	(+ 10)
Histology	(HST)	13,973	14,070	(- 0.7)
Bacteriology	(BCT)	28,730	27,100	(+ 6)
Mycology	(MCO)	1,139	1,084	(+ 5)
Radiography	(PRC 18, 20)	427	540	(- 20)
Trim Tissues	(PRP 12)	11,721	10,285	(+ 14)
Retrim Tissues	(PRP 16)	184	107	(+ 70)
Decalcifying	(PRP 18, 20)	109	207	(- 47)
Parasitology	(PST)	956	946	(+ 1)
Serology	(SRL)	13,955	13,975	(0)
Virology	(VRL, PRC 24, 26)	12,525	10,882	(+ 15)
Toxicology	(TXL)	100	75	(+ 33)
TOTAL		117.226	104,946	(+ 12)

Bees & Honey

Following a relatively mild winter, spring conditions were generally good for package and wintered colony build-up with the exception of the northwest region where cool, wet spring conditions delayed the spring nectar flow. Most beekeepers reported that the summer honey flow was over by the end of the first week of August due to hot, dry weather. The exception to this was the northwest region which has more moisture and therefore an extended honey flow.

Package bee prices in 1983 increased by about 2% over 1982 prices. Prices ranged from $25.00 to $29.25 for a two pound package of bees and a queen. Package bee prices are not expected to increase in 1984.

Due to above average production in Alberta, Saskatchewan and Ontario, weak retail sales and continued strong competition in the international market from Argentina, Mexico and China (Mainland), the honey market remained very soft following the 1983 harvest. As a result of the difficult market conditions, the price of bulk honey

dropped during 1983. Approximately 43 percent of the Manitoba crop was delivered to the Manitoba Co-operative Honey Producers Ltd., about 50 percent went on the "open market" and approximately seven percent moved directly to consumers.

TABLE 9
Honey Prices and Production — Manitoba 1982 & 1983

	1982	1983
Number of Beekeepers	1,600	1,700
Number of Colonies	108,000	111,000
Honey:		
Average kilogram per hive	72	66
Average pound per hive	(159)	(145)
Total Production — kilogram	7,789,000	7,301,000
Total Production — pound	(17,172,000)	(16,095,000)
Price per kilogram — ¢	134	130
Price per pound — ¢	(61)	(59)
Total Value	$10,475,000	$ 9,496,000
Beeswax:		
Production — kilogram	116 835	109 515
Production — pound	(258,000)	241,425)
Price per kilogram — ¢	416	367
Price per pound — ¢	(189)	(167)
Total Value	$ 488,000	$ 402,000
Total Value Honey & Beeswax	$10,963,000	$ 9,898,000

Package Bee and Wintering Survey (1983)

The annual package bee and wintering survey was conducted on all commercial beekeepers, the Manitoba Co-operative Honey Producers Ltd., and Cloverfield Bee Supplies Ltd., to determine the number of colonies established from imported package bees and wintered colonies in Manitoba in 1983.

From the survey it was concluded that approximately 85,171 two-pound packages or their equivalent were imported, with about 70% of these originating from California. Allowing for a 10% loss of the imported packages results in 76,654 "producing" colonies originating from packages. The total number of colonies wintered successfully during the 1982/83 winter amounted to 39,062. With approximately 4,500 colonies exported or kept outside Manitoba about 111,000 producing colonies were operated by about 1,700 beekeepers during 1983. Of this total it was estimated that about 40,000 colonies would be put into winter storage in the fall of 1983.

Beekeeper Compensation Program

As a result of a government program in which communities were sprayed with malathion to control mosquito borne Western Equine Encephalitis, many beekeepers experienced losses of bees and reduced honey production. In response to these losses the government established a Beekeeper Compensation Program, to offer compensation to beekeepers (honey bee and leafcutter bee) and alfalfa seed producers who experienced losses as a result of the mosquito spraying. The initial budget for this program was $850.000.00.

A total of approximately 300 applications for compensation were received from honey beekeepers and approximately 20 applications from leafcutter beekeepers and alfalfa seed producers. Honey bee wintering losses that resulted from the spraying will be considered in the spring of 1984.

Apiary Inspection

During the summer of 1983, 8 per diem inspectors and two summer students were hired to assist in the honey bee disease inspection and control program. A

total of 18,019 colonies were inspected and 297 of them (1.65%) were found to be infected with American Foulbrood Disease. This compares to 1982 statistics of 17,648 colonies inspected and 509 or 2.88% found to be infected with American Foulbrood.

Fumigation

Manitoba Agriculture has operated a honey bee equipment fumigation chamber for several years, to assist beekeepers in the eradication of certain honey bee diseases. As a result of a federal government review of the use of fumigants, a permit to use the fumigant (ethylene oxide) was not issued in 1983 and hence, the fumigation chamber was not operated during the 1983-84 winter.

Research

Agriculture staff were actively involved in monitoring the effects of the 1983 Emergency Mosquito Program on bees and honey production. The results of this research were published in a Department of Environment publication entitled: *Summary Report Monitoring of Western Equine Encephalitis Control Program 1983.*

The Extension Apiarist conducted wintering research on colonies which were sprayed with malathion during the 1983 Emergency Mosquito Control Program. The final report on the effects of the 1983 mosquito spraying on bees is expected to be published in 1984.

Extension Activities

Emphasis continued to be placed on four general extension activities: newsletters, meetings, personal visits and support of regional beekeeper associations. Four general newsletters and eight commercial newsletters are distributed annually. Numerous regional beekeeper meetings were attended. Apiculture staff participated in various courses at the University of Manitoba and information was freely distributed through telephone conversations and personal contact. During the spring 1983, a series of four honey bee disease workshops were held at Swan River, Morden, Boissevain and Beausejour. On-going assistance is provided to the Manitoba Beekeepers Association.

Engineering staff developed information and recommendations on overwintering facilities for bees for Manitoba apiarists.

Bear Damage

Once again, the Department of Natural Resources offered a Bear Damage Compensation Program to beekeepers. During 1983, $55,289 in compensation was paid to beekeepers for bear damage in their apiaries.

In 1983, the Bear Fence Grant Program, which allows for a $100 grant to beekeepers for each electric fence built (up to a maximum of 10 fences/beekeeper/year), was transferred from Manitoba Agriculture to Natural Resources. During the year grants were paid on a total of 31 fences.

Leafcutter Bees

It is estimated that 75% of the land devoted to pedigreed alfalfa seed production was pollinated by leafcutter bees in 1983.

The extremely warm, dry weather experienced across southern Manitoba during July and August provided excellent foraging conditions for leafcutter bees. A producer survey indicated that there was 2.3 fold increase in the number of leafcutter bees produced across the province in 1983. Alfalfa seed yields average 293 kilograms per hectare (261 pounds per acre) across Manitoba.

Department staff cooperated with the Manitoba Alfalfa Seed Producers Association (MASPA) and Agriculture Canada in carrying out a survey to determine the extent of chalkbrood disease in Manitoba leafcutter bees. This resulted in the first

TABLE 10
Leafcutter Bees Statistics — 1983

No. of Beekeepers	100
No. of Bees	130 million
Value of Bees	$650,000 - $975,000
No. of acres pollinated	6,400
No. of hectares pollinated	2 590
Amount of Alfalfa Seed Producted (pounds)	3 million
Amount of Alfalfa Seed Producted (tonnes)	1,361
Value of Seed Produced (farm gate)	$ 2.7 million
Value of Seed Produced (wholesale)	$ 3.37 million

confirmed cases of this disease in the province, involving two operations in the Gimli area. In an attempt to control this disease, Manitoba Agriculture using an Agro-Man Agreement allocation, agreed to cost share a chalkbrood eradication program with the MASPA. Agro-Man funds covered 50% of total costs to a maximum of $10,000 and the remaining 50% was the responsibility of MASPA and the producers involved.

Crop Management and Marketing

Seeding began in early May and progressed satisfactorily with little or no interruption. The cool weather of June, however, retarded germination and general development until the hot weather of July occurred. The prolonged period of heat and general dry conditions affected development of crops in general and barley in particular. Barley ripened prematurely and kernel size was generally below average. Yields of all crops were affected to varying degrees by the lack of rainfall. This dry period extended into the harvest season allowing for a relatively uninterrupted harvest. Fall field work progress well with freeze-up later than usual.

Cereals

Wheat

The area seeded to spring wheat in Manitoba in 1983 was estimated at 1.53 million hectares (3.8 million acres). This is an increase of 13 000 hectares (600,000 acres) over 1982. Production dropped by 7% to 3.26% million tonnes (120 million bushels). This production drop was due to a lower average yield.

The most popular variety continued to be Neepawa, grown on 37% of the wheat area. Columbus, grown for the first time commercially was planted on 15% of the wheat area.

Durum wheat was planted on 81 000 hectares (200 000 acres) and produced 144 000 tonnes (5.3 million bushels) — a drop of 21% over the 1982 production.

Coulter continued to be the most popular Durum variety.

Oats

Oats, planted on 223 000 hectares (550,000 acres) is no longer the popular field crop it was a decade ago. Production dropped by 30% in 1983 to 401 000 tonnes (26 million bushels). Fidler and the new variety Dumont are grown almost exclusively in Manitoba due to their superior leaf and stem rust resistance.

Barley

Barley was planted on 708 000 hectares (1.7 million acres) in 1983. Production of 1.59 million tonnes (73 million bushels) was a drop of 33% over 1982, due mainly to the lower average yield.

Bonanza, a malting variety, continued to be the most popular being planted on 41% of the area. Bedford was popular as a feed barley, planted on 22% of the area.

Rye

Rye was again planted on 83 000 hectares (205,000 acres) — very little change from last year. Production at 160 000 tonnes (6.3 million bushels) was very little change from 1982.

Oilseeds

Flax

This crop occupied 304 000 hectares (750,000 acres), a dramatic drop from the 1982 planting. Production of 297 000 tonnes (11.7 million bushels) also dropped by 30% from 1982 production. The variety Dufferin was planted on 47% of the area and continued to be the most popular variety.

Canola (Rapeseed)

Planting in 1983 to canola was estimated at 384 600 hectares (950,000 acres). This was an increase of 12% over 1982. The Argentine type, Regent was the most popular, being planted on 72% of the area. An estimated 95% of the crop was seeded to canola varieties.

Sunflower

Sunflower planting at 40 500 hectares (10,000 acres) was a sharp decline of 43% from 1982. Manitoba produced 80% of Canada's sunflower crop. An estimated 95% of Manitoba's plantings of oilseed sunflowers were planted with hybrid type.

Special Crops

Grain corn plantings were estimated at 80 970 hectares (200,000 acres) in Manitoba. There was no change from the 1982 figure. The average yield of 2.82 tonnes per hectare (45 bushels per acre) was not high but quality was good. About half of the production was sold to the distilling market and the remainder was sold for feed. The European Corn borer was responsible for a considerable loss in yield.

Crops such as field peas, buckwheat, field beans, lentils, mustard, sugar beets, canary seed, fababeans and soybeans commanded a substantial planting in Manitoba. Most of these crops are grown under contract and provide Manitoba farmers with an increased cash flow and an opportunity to rotate their crops.

TABLE 11
Summary — Major Special Crops — 1983

Crop	Area (ha)	Yield per Hectare	Price	Value of Production	Value per Hectare 1983	1982
Canola	384 600	1.06 t	$375.00/t	$152,878,000	$ 397.50	$ 299.40
Sunflowers	40 500	1120 kg	33¢/kg	$ 15,000,000	$ 369.60	$ 246.00
Grain Corn	80 970	2.82 t	$138.00/t	$ 31,500,000	$ 389.16	$ 329.70
Buckwheat	36 440	656 kg	27.5¢/kg	$ 6,588,000	$ 180.40	$ 148.80
Field Peas	40 485	1680 kg	19.2¢/kg	$ 13,125,000	$ 322.50	$ 352.50
Mustard	12 145	900 kg	32¢/kg	$ 3,480,000	$ 288.00	$ 266.65
Lentils	10 120	1120 kg	28.6¢/kg	$ 3,250,000	$ 320.32	$ 406.95
Canaryseed	8 900	695 kg	21¢/kg	$ 1,300,000	$ 145.95	$ 294.80
Sugar Beets	11 245	31.2 t	$41.00/tonne	$ 14,384,000	$1279.20	$1224.70

Crop	Area (ac)	Yield per Acre	Price	Value of Production	Value per Acre 1983	1982
Canola	950,000	18.9 bu.	$8.50/bu.	$152,878,000	$160.65	$121.17
Sunflowers	100,000	1000 lb.	15¢/lb.	$ 15,000,000	$150.00	$ 99.80
Grain Corn	200,000	45 lb.	$3.50/bu.	$ 31,500,000	$157.50	$133.48
Buckwheat	90,000	12.2 bu.	$6.00/bu.	$ 6,588,000	$ 73.20	$ 60.16
Field Peas	100,000	25 bu.	$5.25/bu.	$ 13,125,000	$131.25	$142.60
Mustard	30,000	800 lb.	14.5¢/lb.	$ 3,480,000	$116.00	$107.73
Lentils	25,000	1000 lb.	13¢/lb.	$ 3,250,000	$130.00	$129.18
Canaryseed	22,000	620 lb.	9.5¢/lb.	$ 1,300,000	$ 58.90	$119.07
Sugar Beets	27,780	13.9 t	$37.20/ton	$ 14,384,000	$517.08	$495.61

Marketing

Marketing Branch staff along with Canadian Commercial Corporation staff conducted a mission to Guyana and Costa Rica for the purpose of advancing barter negotiations involving canola oil for rice in Guyana and black beans for coffee beans in Costa Rica. A second mission to negotiate with the Guyana government was made but results are still pending. Meetings were also held on a barter trade transaction with Guyana on canola oil and margarine for bauxite.

During the year individual buckwheat buyers from Japan visited Manitoba and a delegation from the Japanese Buckwheat Miller's Association also visited the province.

Staff were involved in early discussions aimed at setting up canola meal feeding trials in Cuba. Development work was initiated with the Mexican Department of Agriculture to test different varieties of Manitoba alfalfa seed. Manitoba seed samples were forwarded to Mexico for this purpose, with the objective of developing a demand for such seed.

Enquiries for mustard seed came from Venezuela, Belize, the U.S.A. and Guatemala, with a small sale made to Guatemala. Enquiries were also received for white navy beans, peas, split peas, buckwheat and canary seed, and assistance was provided to Manitoba exporters of buckwheat, flax, canola and fababeans.

The marketing of Manitoba wild rice has received increased attention the past three years resulting in greater consumer interest and increased sales. Some 70% of Canada's annual production is now exported. During the year samples were sent to New Zealand, Switzerland and Japan. A subsequent sale was made to Japan for the first time. Other market support was provided through the preparation of a wild rice brochure and participation in a Wild Rice Conference in Winnipeg.

Seed Production

Seed production in 1983 hit an all-time high of 126 518 hectares (312,500 acres) devoted to pedigreed seed production. A Manitoba membership of 1,583 in the Canadian Seed Growers' Association is the highest provincial membership in Canada.

Table 12
Major Crop Kinds Planted For Seed Production

	1982		1983	
	ha	Acres	ha	Acres
Wheat	36 481	90,108	52 007	128,457
Oats	2 217	5,476	2 000	4,940
Barley	19 147	47,293	21 234	52,448
Flax	14 755	36,445	18 630	46,016
Rape	1 592	3,932	3 280	8,102
Other	33 697	80,762	29 367	72,537
Total	106 889	264,016	126 518	312,500

New Crop Investigations And Development

The search for new crops that can be grown feasibly and economically in Manitoba is a continuous program in Manitoba Agriculture.

Success with lupins and soybeans indicates that these crops could be successfully grown. A soybean market exists and lupins can be used as a high protein feed for animals.

Winter wheat can be grown successfully in Manitoba when the crop is planted in the fall directly into undisturbed stubble. Resistance to rusts is necessary and is an essential part of a continuing research program.

Agro-Man

Three projects operated under a cost-shared agreement with Agriculture Canada and Manitoba Agriculture were conducted for the 4th year in 1983. The Crop Variety Demonstration Project determined the performance of 17 crops and 88 varieties of cereal and special crops, over 300 forage crops, 833 varieties of 135 different annual flower types, 1,400 species of herbaceous perennials and 17 vegetable crops. The trials ranged in location from the University of Manitoba Campus to The Pas in Northern Manitoba.

The Corn Production and Demonstration project examined the performance of corn at 31 locations in fields of 8 hectares (20 acres) in size.

The soybean project was conducted at 24 locations in 20 hectares (50 acres) fields utilizing two of the most newly developed varieties. Excellent production of good quality soybeans suitable for crushing was obtained.

Crop Insect Infestations

European corn borer - The European corn borer occurred in the most serious levels ever recorded. Considerable loss occurred in grain corn in the areas near Altona, Plum Coulee and Morden, where stalk breakage of up to 100% occurred from corn borer damage. Corn throughout the entire Province was infested with stalk breakage up to 30% over wide areas.

Wheat midge - The wheat midge occurred in wheat fields in the northwest portion of the Province. Infestation levels ranging up to 26% of wheat heads examined occurred in the Dauphin, Roblin, Swan River and The Pas areas.

Grasshoppers - Grasshoppers became a severe problem in the Hartney, Lauder, Grand-Clariere area in late June and continued to damage crops and pastures during July and August. Hot, dry weather speeded grasshopper development and provided excellent egg laying conditions during August.

Sunflower midge - Sunflower midge continued to be an economic problem in the Red River Valley and was a contributing factor in reducing seeded acreage of sunflowers in that area. There was no indication that this pest had extended its range west of the Red River Valley.

Armyworms - An outbreak of armyworms occurred in cereal crops in the Interlake and Eastern areas of the Province. The chemical industry provided sufficient insecticide to combat the outbreak so no government action in this respect was required.

Engineering Services - Crops

Grain drying, weed control and special crops, received considerable emphasis from department engineers during the year. Over 140 airflow tests were conducted on various grains to determine the characteristics needed for the design of natural air

drying systems. Fourteen lab tests were conducted on fans including three for a manufacturer, a grain dryer heat exchanger design was developed and tested and five grain handling systems were designed.

Farmer, dealer and manufacturer interest in these topics was reflected by the extensive demand for consultations and for printed information such as the newly revised publications "Fan Test Results" and "Movement of Natural Air Through Grain."

Training, testing and licensing of commercial pesticides applicators was carried out through three courses and ten taped reruns. In this way 52 rights of way, 39 aerial and 93 ground applicators were tested and licensed. In other pesticide related work 520 tests were conducted on sprayer nozzles to determine the acceptability of nozzles being offered on the market. In addition, staff were involved in Weed Fair displays, investigations of new defective sprayers, sprayer clinics, sprayer design and the preparation of operators' manuals.

Other investigations included crop seeding methods and air seeder problems and the design of two seed cleaning plants. Staff prepared lesson material for the SOILS '84 homestudy course and took part in meetings and courses on a wide range of crop related topics. Assistance was also provided to such organizations as the University of Manitoba, Prairie Agricultural Machinery Institute, Manitoba Farm Machinery Board, the Agricultural Engineering Professional Update Course and many other agencies.

The work of the agricultural engineering section has been greatly aided by the in-house development, construction and testing of a computerized data acquisition and processing system.

Horticulture

The 1983 value of Manitoba horticultural crops was down some $5.2 million from the previous year. The total estimated value of 1983 production is as follows:

Potatoes	$27,082,000.
Commercial Vegetables	6,178,500.
Fruit	2,000,000.
Environmentally Controlled Production (Greenhouse and Mushrooms)	5,900,000.
Nursery Products and Sod	8,750,000.
Miscellaneous	4,500,000.
TOTAL	$54,410,500.

Potatoes

The area planted to potatoes in 1983 remained at 16 000 hectares (39,500 acres). Of this total 13.2 percent was produced for table stock, 76.6 percent for processing and 8.2 percent for seed. Gross production was estimated 258 000 tonnes (5,701,000 CWT) and gross yield at 16.1 tonnes per hectares (144 CWT per acre). A higher than normal cullage rate is expected to reduce the marketable production to 205 800 tonnes (4,538,000 CWT).

Spring planting and early season growing conditions provided for normal plant development. Fully adequate rainfall to the end of June resulted in lush growth. Throughout July and August, above normal to record temperatures and lack of rainfall reduced crop potential, particularly of the late maturing varieties. Yields of Russet Burbank were particularly low with below average tuber size and abnormal tuber shape. Red skinned varieties produced a nearly normal yield, but the percentage of small tubers is higher than normal.

Harvest conditions permitted the existing crop to enter storage in satisfactory condition and quality for processing (other than tuber size) and table stock was satisfactory. Commercial fields of the new variety Shepody produced a higher percentage of marketable tubers than Russet Burbank, but gross yield was no better than the standard variety.

Vegetables

Commercial vegetable production in 1983 was estimated at 1 166 hectares. This is a 12 percent decrease compared to 1982. Cabbage, carrot, lettuce and onion production showed sharp declines in planted area.

The 1983 production season was extremely variable with adverse weather conditions. Cool to cold temperatures with damaging frosts were the dominant weather conditions in the spring. The summer months were extremely hot and dry, making continual irrigation in most crops a necessity. Fall harvest of storage crops progressed smoothly with weather only slightly interfering with digging operations. No delays were experienced in moving root and bulb crops into storage.

Yields of cabbage, cauliflower and celery were severely reduced because of plant loss from adverse spring and summer weather conditions. The excessive summer heat and inability to maintain adequate levels of moisture reduced cooking onion yields by at least 33 percent. Green pepper yields were affected by excessive heat and corn borer damage. Yields of the remaining commodities were considered average to above average.

Commodity prices were stronger in 1983. Reduced production in other commercial areas and local home gardens created steady markets for all commodities. Quality ranged from fair to excellent.

Fruit Crops

The area planted to strawberries increased 22 percent in 1983 for a total of 202 hectares (50 acres). No snow combined with ice-sheeting resulted in a 20-30 percent winter injury and reduced average yields. Yields were approximately ½ of the previous year for an average of 4 485 kilograms per hectare. Prices remained stable at $1.76 per kilogram. New plantings in 1983 totalled 225 hectares with a higher than normal mortality (20 percent) due to environmental stress and suspected plant or root contamination.

The area expansion of new raspberry plantings continues to grow from 10 to 14 hectares with an expected 100 percent increased expansion for 1984, based on plant orders for nursery stock.

Environmentally Controlled Production

Some moderate expansion in retro-fitting the existing designs was experienced in the green house industry. Spring bedding plants were basically stable with some undercutting experienced in the latter part of the season. Sales of spring bedding plant crops were below the previous year due to cool spring selling conditions. Seasonal plant sales were strong especially for quality growers. Prices remained stable from the previous year for the seasonal plants. Imports from Ontario, B.C. and the U.S. continue to limit opportunities for stronger growth in this industry.

Mushroom outputs from the new production facilities in the province have displaced some U.S. imports. Production from Manitoba producers averaged 13 608 - 18 144 kilograms per week. Wholesale prices were stable and ranged from $3.08 per kilogram. Local and import competition has kept prices stable over the past several years despite production cost increases. Increased production efficiency has particularly offset the increase operating costs.

Nursery Products

The production of nursery crops approximated 485 hectares (1,200 acres) in 1983. There was new production in the Northwest region and Central region. Several smaller family run nurseries have started in the Interlake and Eastern areas.

Several larger growers have expanded production to fill local "planting out" or "liner" market, but a large percentage of this planting stock continues to be imported from Europe, northern United States and British Columbia.

A wet, slow spring hampered retail sales and a very hot, dry July and August caused some concern for field production. In spite of these conditions growth of field grown stock was acceptable.

Landscape contracting jobs picked up from the previous two years. Bidding on these jobs was very competitive.

Nursery Sod

The production of sod experienced a slight decrease from the previous years. Retail prices remained the same as 1982 and in some cases the prices dropped. Larger established producers maintained their markets, however, smaller growers had to drop prices to retain theirs. Winterkill in 1982 reduced the area available for harvest this past year. Approximately 800 hectares (2,000 acres) were harvested.

Investigation & Development Programs

Investigation and development projects were undertaken to determine new crop production technology and the economic potential of additional horticultural crops. Many of these projects were initiated in co-operation with the University of Manitoba, Agriculture Canada Research Stations and Commercial growers. Funding for specific programs was under the Federal/Provincial Agro-Man Agreement.

Project Summary

- Computer search - research related to nursery stock storage
- Fertility trials on Kentucky blue grass nursery sod (2nd year)
- Cultivar adaptation trials - potatoes, vegetables, small fruit and ornamentals (Agro-Man Project)
- Determination monitoring system to forecast spray program for early blight of potatoes.
- Soil Fumigation trial for disease control in commercial strawberries.
- Evaluation of fungicide, Purogene, for control of Sclerotinia sclerotorium in stored carrots when applied through the humidifier system.
- Disease survey of Canola was carried out involving a total of 55 fields.
- Determination of yield response from irradiated seed potatoes.
- Determination of yield and size response of potatoes to application of Zn to Zn deficient soils.
- Evaluate effect of seed piece size on yields of potatoes.
- Determination of value of whole seed over cut seed in potato production.

- Evaluate effect of varying rates of nitrogen on potato yields and french fry color.
- Monitoring program to determine effect on French Fry color of potatoes held in a number of commercial storages.
- Initiation of monitoring program to determine levels of CO_2 in commercial potato storages.
- Evaluation of soil fumigation for potato production.
- Determination of the extent of spread of bacterial ring rot in potatoes from a contaminated seed cutting knife.
- Evaluation of the commercial potential of high density plantings for strawberries production in Manitoba (3rd year).
- Evaluation of several iron chelate products to determine effectiveness in controlling yellowing in strawberry plants.
- Determination of the effect of soil fumigation on the yields and quality of strawberries.
- Evaluate the effectiveness of plastic mulch for overwintering commercial strawberry plantings.
- Evaluation of tissue cultured strawberry seedlings as a replacement for seedlings grown in a traditional manner.
- Determination of the commercial potential of "Day Neutral" type strawberry production in Manitoba.
- Evaluate suitability of new promising bedding plants for production under local greenhouse conditions.
- Evaluation of new plant types as potential greenhouse trade items.
- Comparison of trickle and sprinkle irrigation in the production of head lettuce.
- Evaluate effect of varying rates of nitrogen on the development of Sclerotinia rot in carrots and the effectiveness of chlorine dioxide ("Purogen") in controlling it.
- Herbicide evaluation trials in onions to find alternative to randox.
- Trial for the determination of fertility levels, rates and depth of seeding for pickling and set onions.
- Evaluation of watermelon and cantelope as viable commercial crops.
- Determination of processing potential of locally grown horse radish.
- Evaluation of commercial Witloof Chicory production in Manitoba (2nd year).
- Consensus budget for Rutabagas compiled in co-operation with growers.

Extension Activities

The technology transfer program in horticulture was undertaken through a wide range of activities. Publications, factsheets and newsletters were produced and distributed throughout the year. Mass media projects in press, radio and television supported the programs and over 2,300 calls for information on the "Hort-Line" were handled through the growing season.

Training sessions were held for department staff and 270 public meetings were attended to cover topics related to crop production and rural and urban landscaping. Six field days designed for commercial growers to view the latest developments in production technology were attended by 350 growers and industry representatives.

Another successful Hort Industry Days program was presented in 1983. This three day educational conference and trade fair was run in cooperation with 5 grower associations, industry and research institutes. The purpose of the event is to update growers on current and new advanced technology in respect to production, handling, storage and marketing of horticultural crops.

Horticultural staff were also actively involved in three out of province field days, the International Wild Rice Association, the newly formed Manitoba Greenhouse Growers' Association and the International Peach Garden Board. Cooperation was also extended to the University of Manitoba in presenting a non-credit course in greenhouse management.

In other areas of activity the horticultural section provided judges for 45 horticultural society exhibitions and also for the provincial home grounds competition.

Northern Horticulture

A winter of record snowfall combined with a summer of the most hours of sunshine, the highest average temperatures and the longest frost-free period ever recorded to produce a satisfactory crop in most northern locations.

The northern horticultural program encouraged expansion of vegetable gardening and environmental horticulture through the following programs.

- Demonstrations of plastic tunnels were held in 16 communities.
- Demonstration outdoor gardens were established in 15 communities to promote the production of vegetables other than potatoes.
- Youth gardening materials in the form of seed and fertilizer were made available to 79 children in 11 communities.
- Field demonstrations and technical backup for semi-commercial production were provided to operations in Cross Lake, Herb Lake Landing, Ilford, Garden Hill, Suckin Lake, Snow Lake, Wabowden, Cormorant and Point Lake. A tour

for northern farmers of southern operations was provided with particular emphasis on forage seed production.

- Consultation and onsite visits were provided to 36 communities. In addition access to an information file of 160 publications relating to various aspects of northern gardening was provided to interested persons.
- Workshops on gardening were held in 16 communities with a total participation of 342. In addition 17 meetings of Northern Horticultural Societies attracted a total attendance of 331 gardeners.
- Services were provided in the form of landbreaking equipment for 15 acres, rototilling for the initial preparation of 102 gardens in eight communities and the provision of 5 Hp handtillers for 15 settlements under the supervision of Nutritional/ Health Advisors. A total of 85 gardeners utilized the tillers.
- The Horticulturalist working out of the Thompson office represented the Department on the Block Planning Committee which evaluates proposals for agricultural use of Northern Crown Lands.

Plant Pathology Laboratory

The Department's Plant Pathology Laboratory provided a diagnostic service involving a total of 6,640 samples. A decrease of 16% to that of 1982, due mainly to an extremely dry summer. Bacterial ring rot of potatoes appeared as a major problem. The canola crop in Central, Southwest and Northwest regions was surveyed with Sclerotinia fungus showing up as the major disease.

Analysis for sugarbeet cyst nematodes were carried out on soil samples from 197 fields. Positive identification was made in 10 field samples.

Analyses for Ascochyta were made on 64 samples of Lentil seed. A total of 32 samples were carrying infection.

Special Tariffs - Co-ordination of the implementation and cancellation of specific duties on fresh fruit and vegetable products for the Western Tariff Zone (Thunder Bay to West Coast) was carried out on behalf of the Canadian Horticultural Council. Action was taken on 20 items.

Elite Seed Potato Farm - Manitoba Agriculture, in co-operation with the Manitoba Seed Potato Growers' Association, established Espo Farms to ensure a source of disease free seed stock to be used in producing commercial seed potatoes in Manitoba. In 1983, 7.44 tonnes of Elite I, 18.9 tonnes of Elite II and 111.4 tonnes of Elite III potatoes were produced, sufficient to meet growers' demands. The project is funded through the Agro-Man Agreement.

Regulatory

The Horticultural Section was responsible for the administration and serving of four Provincial Acts;

Manitoba Fruit & Vegetable Sales Act - regulates the grade standards of fruit and vegetables sold within the province. A complete revision of the regulations was undertaken in 1983.

Manitoba Horticultural Societies' Act - Grants for membership and prize list in the amount of $17,591.52 were distributed to 45 societies in 1983/84 fiscal year.

Manitoba Plan Pests and Diseases Act - In the administration of this Act 23 nurseries were inspected for freedom from disease. Two, one week short courses were also held for individuals wishing to obtain their licences for commercial tree pruning services. A total of 188 participated in the courses.

Manitoba Dutch Elm Disease Act - The Department provided the diagnostic service required by the Department of Natural Resources in carrying out their surveillance program for D.E.D.. A total of 4,477 samples were processed.

Dealer and Applicator Training - Educational courses on disease control required for the licensing of pesticide dealers and applicators were continued. A total of 275 dealers and applicators participated.

Pesticide Safe Handling and Application Seminars - Meetings were held in Portage and Winkler with total participation of 78 growers.

Facilities And Equipment

Department engineering staff were involved in extensive projects in horticulture including a potato damage survey, detailed design of 20 potato storage units, two vegetable storage units, and numerous inquiries on greenhouse lighting and heating, refrigeration and ventilation of vegetable storages and provision of adequate humidity levels in vegetable storages.

A mechanical polyethelene mulch applicator was provided to 6 growers for the application of plastic mulch to corn, peppers and vine crops.

Marketing

Department marketing staff worked closely with Manitoba vegetable growers and the Manitoba Vegetable Producers' Marketing Board to find new markets for fresh winter and summer vegetable crops. The vegetable growers are included in many of the promotional activities, including shopping mall promotions and exhibitions throughout the year. Market development and promotional work is also done with the local wholesale and restaurant trade to

encourage greater use and sales of Manitoba vegetables. This is done in conjunction with the Fresh for Flavour Foundation and the Manitoba Vegetable Producers' Marketing Board via meetings, press luncheons, press releases and participation in trade shows.

The Manitoba Strawberry Growers' Association was assisted with publicity, and up-dated Manitoba U-Pick Berry Farms maps and Strawberry "Fresh to You" recipe brochures.

A new provincial Greenhouse Growers' Association was organized and staff helped with press releases and a special garden supplement in the Winnipeg Free Press to promote local greenhouse and nursery industries.

In 1983, over $400,00 worth of silverskin onions, grown and processed in Portage la Prairie, were sold to Canadian and United States pickle companies. In March 1984, a mission called on Eastern Canadian pickle companies to pre-market a portion of the 1984 Manitoba silverskin onion production. This is a relatively new market for Manitoba as pickle companies traditionally imported all their silverskin onions.

Forage and Pasture Management

The Department's Grassland Section coordinates and develops regional forage programs to meet the needs of the livestock producers in Manitoba. Over the years this has involved 14 major grassland demonstration projects located throughout the Province. Twelve of the projects are related to beef, one to dairy, and one serves both dairy and beef. About 2,600 producers have been directly involved in these projects since they started in 1974. Producers are closely involved in the management and direction of the projects. The Department absorbs the operating costs, which are minimal since farmers supply the cattle. All projects are administered by Regional staff.

The Department's Grassland Management Program is intended to demonstrate the benefits of forage management with maximized use of grass, legumes, and annual crops. It is a direct extension method for establishing visible benefits to livestock producers. On-farm demonstration projects are conducted as a second stage to this extension program.

Regional Grassland Projects

Three grassland pasture demonstration projects were carried out in the Northwest region to provide practical and useful information on forage management and livestock management on pasture. Technical and economic reports, as well as a comparative brochure, were prepared on the results of the demonstration and made readily available to staff, participating farmers and others. Forage variety seed plots and sod seeding demonstrations were particularly useful to farmers throughout the region.

In the Southwest region the Marco grassland project continued to demonstrate feeding and management programs for beef cow-calf pasture situations. The project included A.I., breeding, implanting and pasture management. Fifty cows from 25 contributors were involved during the year. Two field days were held at the Marco site.

The Central region carried out forage management demonstrations through four Agro-Man projects: Alonsa, Pembina, St. Alphonse-Bruxelles and Louise. The objective was to have the 169 farmers participating develop new skills and knowledge in pasture and forage management. Project activities during the year included fertilizer demonstrations, weed control, seeding techniques, gully stabilization, tree planting, forage variety tests, gopher control, insect control and various livestock demonstrations.

In the Eastern Region the Eastern grassland society and the Stuartburn Piney Agricultural Development Association (SPADA) were particularly helpful in sponsoring most of the forage-pasture activities in that region. Demonstrations included sod seeding, bush and weed control, roller drum seeding, cover crops, annual forages, silage demonstrations, a forage survey to determine current production levels and five pasture management projects. The Seven Sisters grassland project, involving 173 heifer calves from 80 farmers, was designed to show maximum returns from good pasture management.

Because of the importance of forages and forage seed production in the Interlake region, staff were heavily involved in determining recommendations regarding seed varieties and other aspects of pasture and forage production. Extensive extension work was carried out in this area with such activities including brush control on native pastures, forage seeding techniques, varieties testing demonstrations, general production and management and the management of livestock on pasture.

Grass Species Investigation Program

Staff are currently involved in evaluating two new strains of grasses for Manitoba conditions, a tall fescue and an orchardgrass. These strains have been multiplied up from less than 5 grams each of the original stock seed. To date, approximately 45 acres of the Gunton Project, plus several pastures at the Regional Projects, have been seeded down to these species, both by themselves and in combination with alfalfa. It is intended that these pastures will be intensively grazed to establish the value of these new

strains under Manitoba conditions. To date, the orchardgrass appears to be significantly more winter hardy than varieties currently recommended in the Province. The tall fescue, while it appears adapted to our climate, is not proving as productive in the pasture situation as it was originally hoped.

Forage Seed Production

Total production of all forage seeds, including foreign and public varieties, decreased slightly in 1983. However, the total farm value of such seed increased from $5 million in 1982 to $7.3 million in 1983.

Once again, there was a decrease in the area harvested for forage seed in 1983. Most of the decrease came in timothy in a response to a low price cycle over the last several years. Due to favorable weather conditions there was an increase in yield which offset the decrease in acreage. There was a large increase in production of alfalfa seed due to a combination of improved yields and increased acreage. In total, the 1983 forage seed crop decreased by only 3% from the 1982 crop.

In general, the prices paid to producers held steady or advanced in relation to 1982 prices. Alfalfa, meadow fescue, single cut red clover, and timothy recorded advances in prices. The firming up of prices was attributed to a stable supply and a strengthening in consumer demand. The following table indicates the average farm gate price for a combination of Certified and Common seed.

TABLE 13
Average Prices For Certified And Common Seed — 1983

	Production		Price Per		Farm
	Pounds (000)	Kilograms (000)	Pounds ($)	Kilograms ($)	Value ($000)
Alfalfa	2,870	1,300	.90	1.98	$2,583
Birdsfoot Trefoil	298	135	1.75	3.86	521
Bromegrass	165	75	.35	.77	58
Kentucky Bluegrass	243	110	.30	.66	73
Meadow Fescue	132	60	.45	.99	59
Single Cut Red Clover	750	340	.38	.84	285
Sweet Clover	4,250	2,000	.18	.40	765
Timothy	7,500	3,400	.40	.88	3,000
	16,208	7,420			$7,344

Canadian Forage Seed Project

The Canadian Forage Seed Project was established to multiply and distribute Foundation seed of the Canadian Public Forage Varieties. In 1983-84, applications for Foundation forage seed were up substantially from 1982-83.

Part of the increase in applications was due to an improvement in prices received for the 1983 crop. Applications for Foundation alfalfa were up substantially, while those for Foundation timothy were down substantially, both in response to signals from the market place. Due to the shortage of seed of some varieties, noteably Leo Birdsfoot trefoil, it was not possible to fill all requests. In total, 200 orders were received from Manitoba farmers and only 149 orders were filled. Some 7,770 kilograms (17,147 pounds) of Foundation forage seed was distributed. This amounted to 65% of the 11,990 kilograms (26,440 pounds) ordered. The volume of seed distributed under this project in 1983 was 149% higher than the corresponding figure for 1982.

Grassland & Forage Production & Handling Demonstration Project #301

The Grassland & Forage Production & Handling Demonstrations Project was funded under the Federal-Provincial Value Added Crops Production Agreement. The intent of this project is to improve the production, handling, and utilization of grasses and other forages grown for livestock feed by demonstrating modern grassland livestock management technology. It also investigates and demonstrates economical methods for on-farm storing, protecting, processing, and feeding forage. This project is operated by regional staff once sub-projects have been reviewed and approved by the Grassland Section. The Grassland Section also acts

as a resource to the regional demonstrations.

The Project results to date have been very encouraging. A high proportion of Manitoba's livestock producers have been exposed to the numerous and varied demonstrations that have been run under the Project. There has been very good acceptance of the Project by both farmers and staff.

Grassland & Forage Production & Handling Demonstration Project #303

The Forage Seed Production & Demonstration Project is also funded under the Federal-Provincial Value Added Crops Production Agreement. Most of the funds involved in this project were contracted out to the Manitoba Leafcutter Bee Association for work with alfalfa seed production. This year, the Association successfully completed its five year contract and published a final report. The Association was able to demonstrate to producers that they could maintain production levels on test fields close to 650 kilograms per hectare (600 pounds per acre). Part of the provincial increase in alfalfa production is undoubtedly attributable to the influence of the demonstrations that have been conducted by the Leafcutter Bee Association.

Also, under this Project, staff established several trials dealing with timothy, Birdsfoot trefoil and Kentucky bluegrass seed production. Unfortunately, due to drought and other establishment problems, the original seedings were lost. However, work is continuing with Kentucky bluegrass and Birdsfoot trefoil in particular.

Weed Control

Weed control on cropland was generally adequate in 1983. The trend to increased use of postemergent herbicides and a corresponding decline in the proportion of crop treated with soil incorporated herbicides continued in 1983. Analysis of herbicide use data from Manitoba Crop Insurance Corporation questionnaires (1982 crop season) indicated that the greatest use of soil incorporated herbicides was in the southwest region.

Concern over restrictions on crop rotations caused by residual herbicides was evident in 1983. Use of these products continues to decline in Manitoba.

Perennial weeds such as Canada thistle and quackgrass created problems in many crops as control options are limited. These weeds are of particular concern in longer season crops such as corn and sunflowers, which limit fall control efforts.

An infestation of yellow nutsedge was confirmed in several fields in the Morris area. This weed had not been previously reported in the province. It is an extremely persistent perennial which has the potential to cause serious crop losses, particularly in corn and other special crops, if allowed to spread.

Investigations

Several evaluation trials were conducted to support annual recommendations. Highlights included:

- Evaluation of the tolerance of 9 seedling legumes and 17 seedling grasses to herbicides. Only limited information has been available on weed control in forage crops. These trials at Arborg and Manitou represent a first step in identifying herbicides for potential use in a wide variety of forage species. Trials will continue in 1984 to support registration of promising products and will be expanded to include established forage species.

- Proso millet in corn was controlled by two experimental products. Of existing corn herbicides, Eradicane preplant incorporated followed by Bladex as an early postemergence treatment provided the best control.

- Control of Canada thistle in corn with an experimental herbicide was again superior to current recommendations. Registration of this use is being encouraged.

- Roundup at reduced rates and in combination with ammonium sulphate fertilizer was evaluated and supported recommendation of the reduced rate application.

- Herbicides for control of bladder campion were evaluated.

- Current recommendations and experimental herbicides for control of kochia, roundleaf mallow, night flowering catchfly and hemp nettle in cereal crops were evaluated and supported current recommendations.

- A comparison of alternatives to the use of CIPC + Randox on onions was conducted, but none of the currently available products were adequate to replace Randox.

Biological Control

Monitoring continued on insects previously released for control of leafy spurge and nodding thistle. Biological control is slow and difficult to establish, but has the potential to provide environmentally safe methods of weed control in inaccessible areas.

Two additional releases were made in 1983, with the cooperation of Agriculture Canada:

- In cooperation with the Brenda-Winchester Weed Control District a leaf gall fly *(Cystiphora sonchi)*

was released near Deloraine to control perennial sow thistle.

- In cooperation with the Oakland-South Cypress and South Central Weed Control Districts further releases were made of two related insects, *Aphtona flava* and *Aphtona cyparissias,* for control of leafy spurge.

The seed-head weevil *(Rhinocyllus conicus)* infesting nodding thistle was spread to new locations. A field day organized by the Pembina-Manitou Weed Control District enabled farmers to collect thistle heads containing the weevil for transport back to their farms.

Herbicide Useage Planner

The interactive computer programs on Telidon were well received by farmers. These herbicide selection aids were accessed 18,541 times. Information available was expanded by adding winter wheat recommendations to the planner.

Weed Control Districts

Thirty-four weed boards operated in 1983. Weed supervisors enforced the Noxious Weed Act and assisted farmers and homeowners by providing weed control information. They made 4,372 farm calls, identified 2,123 weeds, calibrated 197 sprayers, carried out 1,790 inspections and responded to over 20,000 telephone inquiries. Total weed district expenditures of $1,366,000 were supported by Weed District grants totalling $342,328.

Manitoba Agriculture provided technical support to the weed supervisors including two one-week schools and a correspondence course training program.

Weed Fairs

Two-day fairs at Brandon and Winnipeg drew a total attendance of 6,300. The Weed Fairs continued to provide one-stop weed information centres for farmers, with information also available on other pests, fertilizers, and related equipment.

Concurrent program sessions and handout materials covered four themes — Canada thistle, quackgrass, tank mixing wild oat herbicides and new information. "Hands-on" weed identification workshops were conducted twice each day.

Herbicide Use

In 1983 herbicide use increased slightly over the 1982 levels. Reduced use of phenoxy herbicides was more than offset by the use of other herbicides for broadleaf weed control. Use of TCA and dalapon continued to decline while use of wild oat herbicides increased.

TABLE 14
1983 Herbicide Use

Herbicide	Amount Used
2, 4-D ester	137 700 kg
2, 4-D amine	456 300 kg
MCPA ester	65 800 kg
MCPA amine	489 000 kg
MCPA Na & K salts	55 300 kg
TCA	75 200 kg
Dalapon	5 100 kg
Other herbicides	629 800 kg
Wild oat herbicides	2 398 900 kg

Agro-Man

In the Central region an Agro-Man project on diffuse knapweed commenced in 1982 and will run through 1984 Infestations of this weed has been surveyed and all infested areas treated. Follow-up checks are carried out and retreated where necessary. The Stanley-Thompson Weed Control District and the local Agricultural Representative will continue to monitor after the project terminates.

A bladder campion Agro-Man project operated in the Eastern region under a contract with the Southeast Bladder Campion Control Association. Aimed at education and control, the project involved a bioassay plot and a tour illustrating the effects of herbicide residues, tillage demonstrations, a survey to identify infestations and general promotion.

Soil And Water Management

The Soil and Water Section became part of the Soils and Crops Branch on July 1, 1983. This section is responsible for all soil management related activities including soil fertility, the soil testing laboratory, soil management and conservation, on-farm water management and irrigation.

Provincial Soil Testing Laboratory

The Soil Testing Laboratory processed a total of some 31,000 samples, of which 30,315 were soil samples and 795 plant tissue samples. Some 12,000 field samples from about 348 000 hectares (859,500 acres) of farmland were submitted to the laboratory for analysis.

Soil tests in 1983 revealed a higher than average soil nitrogen content. This meant a considerable saving in fertilizer costs to farmers who soil tested compared to those who used general recommendations.

The Provincial Soil Testing Laboratory continues to stock and sell "at cost" soil sampling equipment and soil thermometers to encourage proper soil sampling.

Laboratory staff made presentations at 12 farm meetings; at Horticultural Industry Days; M.I.A./M.D.A. update on soils and the University short course for agricultural lenders.

On-Farm Water Management

The on-farm management program focused primarily on providing surveys and designs for on-farm drainage. Seventy-three quarters were surveyed and designs provided at a cost to the farmer of $30 per quarter. Revenue to the Province for this service amounted to $2,190.

One on-farm surface water consolidation demonstration/investigation project was implemented to determine the feasibility of pothole consolidation. Seven quarters were surveyed to lay out designs for farmers interested in this project. Two demonstration field days were held to investigate the potential for small scale irrigation from consolidated water bodies.

Six survey schools involving 70 farmers were conducted to instruct farmers and municipal employees on the legalities and techniques of on-farm drainage.

The Department's irrigation program has two major functions: to process applications for irrigation rebates and to provide technical assistance to irrigators. Twenty-one rebate applications were processed resulting in some $42,550 being paid out in grants to new irrigators.

Two issues of the irrigators information bulletin "The Piper" were produced and distributed, technical advice was provided to the Roblin Effluent Irrigation project and one irrigation seminar was held in Brandon with 75 farmers attending.

Irrigated acreage in Manitoba increased slightly in 1983 to just over 10 800 hectares (27,000 acres).

Extension Activities

The Department's annual homestudy course was on soils this year and it proved to be an effective extension program. Called SOILS '84, the course drew an enrollment of 2,250 farmers who were provided with a large volume of timely information on all aspects of soil management and conservation. A concluding evaluation by participants indicated the course was very well received.

Some 25 different types of programs were implemented throughout the province including gully stabilization, field shelterbelt restoration, crop residue management, annual shelterbelts for erosion control, saline soil management and the effects of erosion on crop yields. Demonstrations showed proper shelterbelt thinning for snow control, the restoration of eroded land and tillage practices designed to reduce soil erosion and conserve moisture.

Soil fertility field investigations focused primarily on micro-nutrient deficiencies in organic soils and nitrogen rate studies. Several plots were set out during the growing season and extension meetings were held to explain proper fertilizer placement.

Technical assistance was provided to a new Agro-Man project on the management of saline soils and to the five conservation districts in the province. In addition, a project designed to investigate the possibilities of crop production without chemicals was initiated during the year.

Land Utilization

The Section objective is to provide the basic soil resource information and assist in the department's input into land use planning for the reasonable and judicious use of Manitoba's agricultural land resource.

Soil Survey

The systematic inventory and evaluation of Manitoba soil resources is a continuing program supported jointly by the Manitoba Agriculture and Agriculture Canada. The University of Manitoba, through the Department of Soil Science provides office and laboratory space and administrative services related to special projects on behalf of soil survey. The major function of the soil survey continues to be provision of essential soil resource data and related research and land evaluations required by provincial government departments representing a land use and planning function or a related administrative function.

The main emphasis of the 1983-84 inventory program focused on the detailed resurvey and land evaluation of selected areas in southern Manitoba. These resurveys at 1:20,000 scale provide detailed soil resource information to assist in the planning, allocation, and management of land resources for agriculture, rural residential planning and intensive outdoor recreational uses. Approximately 138 640 hectares were surveyed at a scale of 1:20,000 in 4 selected areas of southern Manitoba. These projects included agricultural surveys for special crop production, conservation, and irrigation near St. Claude, Roland, and The Pas: planning & assessment surveys at Westbourne, Woodlands and 12 rural towns; and parks surveys at Beaudry, Whiteshell and Wanipigow.

Interim reports and maps are being prepared for all

TABLE 15
SOIL SURVEYS TOTAL HECTARAGE COVERED

	1983-84	To March 31, 1984
Initial reconnaissance	—	18,617,436
Initial detailed survey	—	16,460
Detailed resurvey	138,640	1,816,050
Biophysical survey	—	12,521,000

1983 projects. The interim soil report was released for the West Portage-MacGregor area.

OTHER SOIL SURVEY ACTIVITIES INCLUDE:

- The continuing program of detailed soil surveys was shared among requests from the provincial government Departments of Agriculture and Municipal Affairs.
- Continued development of automated data handling capability for all cartographic information and supporting soil and related landscape data compiled by the soil survey. This capability is designed to increase efficiency of the soil survey operation and to provide more quantitative soil data to users.
- Continuation of land evaluation studies, primarily in agriculture. The soil survey is involved in developing a data base for land evaluation through the ongoing program of detailed resurveys and through long term monitoring programs of soil temperature, soil moisture and climate relations. Soil survey data provides input for the development of various soil-climate based crop growth and yield models for quantitative agricultural land evaluation.

Land Use Planning

Section staff and regional Land Resource Specialists represented agricultural interests in subdivision and land use issues relating to the Planning Act and Provincial Land Use Policies. Assistance and advice was given to planning districts and municipalities in formulation of basic planning statements and development plans.

Investigative and consultative input was made in the areas of organic soil management, fringe agricultural development, Crown lands, Hydro transmission rights-of-way and compensation, assessment review, pipelines, rail line abandonment, sewage sludge disposal, land use guidelines for livestock operations, and Clean Environment hearings.

Other work in land use involved a detailed investigation of production potential of Manitoba's peat soils and extension efforts aimed at improving production on these soils. Activities included farmer demonstration trials on crops and varieties, water management plots, climate recording sites, extension meetings and use of media. Staff also assisted in the planning and preservation of Manitoba's agricultural land resource base through evaluation of the agricultural impact of development projects, basic planning statements and development plans and extension of agricultural land use planning information to the public, municipalities and staff.

Both the Interlake and Eastern regions carried out soil and drainage projects in association with the Manitoba Peatland Association. In addition, Eastern staff participated in technical committees on Agro-Man drainage projects. These included the Cook's Creek Drainage Project and the Marsh River Project.

Agricultural Crown Lands Land Use

Agricultural Crown Lands utilize .78 million hectares (1.93 million acres) for livestock grazing, hay production and annual cropping. The Crown Land Classification Committee (CLCC) has been active in processing land for the Crown Land Sale Program and the Local Government District Exchange Program.

Sale Of Agricultural Crown Lands Under Lease

From the inception of the program, 1,710 applications to purchase have been received. There have been 1,160 parcels deemed saleable, 515 parcels were deemed unsaleable, 30 parcels have yet to be reviewed, and five rejected applications are being appealed. A total of 749 parcels have been sold.

Local Government District Lands

A Local Government District Task Force was established in 1979 to negotiate with each Local Government District Council relative to the return, exchange or sale of Local Government District vested lands.

TABLE 16
Transfers And Exchanges To December 31, 1983

	No. of Parcels	Hectares	Acres	Value
Returned to LGD's	544	35,452	87,603	N/A
Sale to Lessee	145	9,389	23,200	$ 924,020.00
Crown Land Exchange	221	13,391	33,090	$1,386,940.00
Crown Land Under Negotiations	300	19,425	48,000	N/A
LGD Land Exchange	250	16,333	40,360	$1,367,530.00
LGD Land Under Negotiations	293	18,972	46,880	N/A
Completed Appraisals	1,282	83,011	205,120	N/A

In cases where local government districts prefer to see their agricultural lands administered by Manitoba Agriculture, they are included in an Agricultural Agreement between the Department and the local government district. These lands are administered under the same conditions as apply to Crown lands and are eligible for all programs including the Crown Land Improvement Program. There are 1,427 parcels totalling 92,400 hectares (228,320 acres) included in the Agreements.

Leasing And Permitting

Although the total number of Forage Lease dispositions decreased by 25 in 1983, the total acreage under Forage Lease increased by 3,193 hectares (7,889 acres).

In 1983 there were 44 In-family Transfers of leases involving 186 parcels of land compared to 58 In-family Transfers in 1982, involving 331 parcels of land. There were also 15 Unit Transfers in 1983 involving 163 parcels of land compared to 15 Unit Transfers in 1982, involving 108 parcels of land.

Voluntary surrenders were actioned on 105 leases comprising 307 parcels.

There were 23 leases involving 58 parcels cancelled for non-payment of rent, and four leases involving 26 parcels cancelled for non-use.

TABLE 17
Leases And Permits - 1983

Type	Number	Hectare	Acre
Forage Leases	2,665	644,635	1,592,892
Casual Grazing Permits	88	3,693	9,125
Renewable Grazing Permits	166	6,682	16,512
Renewable Hay Permits	1,299	70,522	174,261
Casual Hay Permits	407	21,527	53,193
Cash Rental Agricultural Lease	275	32,216	79,605
Lease Options	2	71	175
Special Leases	1	52	129
Totals	4,903	779,398	1,925,892

Advertisement And Allocation

During the year, 515 quarters were advertised for lease or permit. Of these, 195 quarters received one application only, and 94 quarters received no response. Multiple applications were received on 225 quarters and one quarter was withdrawn from allocation.

Agricultural Crown Land Advisory Committee

A total of 69 allocation appeals involving 120 quarters were heard during 1983. The appeal hearings resulted in 48 (40%) of the allocated quarters being upheld and 72 quarters (60%) of the allocated quarters were changed.

Five appeals were heard by the Committee regarding Unit Transfer requests which the Branch denied. One Unit Transfer request was allowed and four were denied.

Four appeals against cancellation of forage leases were heard by the Committee. The Committee recommended that one forage lease be cancelled, and that cancellation proceedings on one forage lease be dropped. Decisions regarding two forage leases were deferred.

The Committee also reviewed four cancellation appeals that had their decisions deferred. It was recommended that two forage leases be cancelled and that the cancellation proceedings be dropped on two forage leases.

Purchase Of Improvements

The purchases of improvements for the calendar year 1983 totalled $24,442. Crown-owned improvements for the value of $17,709 were sold to lessees acquiring lands in 1983.

Carrying Capacity Of Grazing Or Hay Lands

As of December 31, 1983, the total rated carrying capacity of all lands under Forage Lease was 621,414 animal unit months. In addition, lands under various types of annual permits had a rated carrying capacity of 69,515 animal unit months.

Crown Land Improvement Program

The low livestock prices did not seem to have a negative effect on the program and all available funds were spent. Weather conditions for breaking and seed-bed preparation were poor, but were ideal for clearing. A new category system for eligibility for development was incorporated into this program. In 1983, this program was made available to 114 new clients on 220 quarter sections, totalling $314,436 and 788 clients were carried over from previous years on 1,614 quarters totalling $162,481. In 1983, there were 1 848 hectares (4,565 acres) cleared; 1 968 hectares (4,866 acres) broken; and 1 638 hectares (4,049 acres) prepared for seeding at a cost of $476,917.

There were 280 hectares (694 acres) foliar sprayed and 260 hectares (646 acres) re-sprayed for control of willows and underbrush. Total expenditure for this activity was $13,400.

Community Pastures - P.F.R.A. Administered

There are 24 community pastures covering 177 474 hectares (438,541 acres) in Manitoba. One emergency pasture was maintained from the 1980 drought (Libau) due to on going field renovations. Patrons are charged a user fee to recover the annual operating cost of the pastures. Rates for 1983 were increased.

TABLE 18
Community Pasture Statistics

Operating pastures	24	
Hectares (Acres)	177,474	(438,541)
Carrying Capacity	39,932	
Patrons	1,120	
Cattle & calves	57,556	
Horses & colts	1,110	
Breeding Cows	17,337	
Losses	318	
Bulls (includes rental)	689	

Co-Operative Pastures

The Shoal Lake Hay & Grazing Co-op Ltd. is the only co-operative pasture in the Province. It involves 1 722 hectares (4,255 acres) located in the Interlake Region.

Grassland Demonstration Projects

There were no new projects during 1983. The Interlake Grassland Society was discontinued. Four Grassland Society Projects were in operation on Crown land in 1983, involving 720 hectares (1,782 acres).

Tree Covered Rangeland Improvement Project

Since 1979 the Agricultural Crown Lands Branch has been charged with the responsibility of the financial administration of the Tree Covered Rangeland Improvement Project of the Canada-Manitoba Subsidiary Agreement on Value Added Crops Production (Agro-Man). Interest rebate assistance is provided to farmers who borrow money to develop their privately owned tree covered rangelands

through the land development stages of clearing, breaking and seed bed preparation, which is usually a two year period.

During the year 1983, 56 clients paid a total of $304,066 to contractors for work undertaken with the program. They borrowed a total of $264,544, resulting in interest rebates of $101,381 on 1 280 hectares (2,700 acres) under development.

Insect Control

Extension activities in entomology are carried out to make people more aware of safe, effective methods of pest management and the potential hazards which could result from the misuse of insecticides. Servicing enquiries from field staff, dealers, applicators and farmers requesting insect identifications and control information is a major activity during the growing season. Economic threshold guidelines and control recommendations were provided in various bulletins and from May through August, 16 issues of the Manitoba Insect Report were forwarded, on a weekly basis to approximately 1,200 persons advising on, or directly involved in insect pest management. Field surveys were carried out on a regular basis during the growing season to provide early warning of potential infestation of crop pests.

Surveys

European corn borer - Damage assessment was conducted to determine the overall losses attributed to this insect in grain corn. Previously, the corn borer has not been of significance in grain corn. Stalk breakage of up to 100% and losses of yield of up to 50% were recorded in the areas near Altona, Plum Coulee and Morden in 1983. Elsewhere, corn borer was present in all corn fields, but stalk breakage was considerably less, ranging up to 30%.

Assessments were made on a corn field treated with Furada for corn borer control. One application gave excellent control, resulting in a yield double that of adjacent untreated fields.

Wheat midge - Samples of wheat from the Dauphin, Roblin, Swan River and The Pas areas were collected and analysed for wheat midge. The midge occurred in all areas and damage assessments ranged up to 26%.

Grasshoppers - Staff cooperated with Agriculture Canada in carrying out adult grasshopper surveys and the information obtained was used to produce the 1984 grasshopper forecast. The 1984 forecast indicates that the area of infestation has increased by two and one half times compared to 1983. The largest area of infestation is expected in the southwest corner of the Province, extending south and west from Oak Lake to the United States and Saskatchewan borders with smaller areas of infestation forecast east of Brandon, south of Gladstone, in the Stockton area and in parts of the Red River Valley.

TABLE 19
1984 Grasshopper Forecast

	1984	1983
Light	4 092 km² (1580 sq mi)	1 878 km² (725 sq mi)
Moderate	1 932 km² (746 sq mi)	505 km² (105 sq mi)
Severe	91 km² (35 sq mi)	—

The Department provided assistance to municipalities in control of grasshoppers on roadsides, drainage ditches and other public lands. The assistance was in the form of a rebate for the purchase of chemical applied by the municipality or someone hired by the municipalities.

Sunflower midge - Seventy fields were surveyed for sunflower midge. The results showed the infestation had expanded somewhat in all directions, but was still confined to the Red River Valley. The area expanded northward to a line connecting Winnipeg, Starbuck and Ile des Chenes. It was bordered on the west by Morden and on the east by Steinbach.

Spruce budworm - a total of 30 spruce branch samples were collected from the resort area on the west side of Lake Winnipeg. The samples were examined for spruce budworm eggmasses and the data was used to produce a 1984 forecast.

The forecast indicated that the area north of Hnausa could expect severe damage from spruce budworm in 1984. The area south of this could expect isolated pockets of light to moderate severity.

Pesticides Control

A total of 891 retail pesticide dealers and 211 commercial pesticide applicators were licensed in 1983 under the Pesticides and Fertilizers Control Act. The qualifications for licensing were the attendance at training courses and successful completion of written examinations. Dealers and applicators are recalled to courses after four years to requalify for licensing.

Dealer and Applicator Training - Five pesticide dealer/applicator short courses were held in early 1984, attended by 196 dealers and 255 applicators. Dealers and applicators completed supervised written examinations at the courses to qualify for licensing. Separate training and examinations were held for 2 pharmacists and 16 veterinarians. Training courses for applicators included aerial, ground, rights-of-way and landscape pest control.

A total of 28 dealers completed examinations for "Provisional" Pesticide Dealer's Licences, to be renewed only by completing full requirements for licences. Eight applicators were licensed on a provisional basis.

Dealers and applicators were provided regularly with updated educational material on the control of insects, weeds, plant diseases and vertebrate pests.

Enforcement - Approximately eighty unlicensed dealer outlets were contacted, and one was found to be selling pesticides in violation of the Act, and prosecuted.

Twenty investigations were made into alleged drift damage to crops, shelterbelts and gardens. Eighteen involved aerial applicators and 2 involved ground applicators. All complaints except one, involved herbicide damage. Warning letters were sent to 3 applicators.

Pesticide Residue Testing Program - A monitoring program for pesticide residues in agricultural products continued in 1983 under the direction of the Committee on Pesticide Residue Testing. A total of 339 samples were analysed. One serious contamination of lindane in poultry, as a result of use of leftover treated seed, was found and corrected. Investigations are carried out on serious contamination problems with the objective of correcting the problem at the source and so preventing further problems.

Cholinesterase Blood Tests - The testing program for blood cholinesterase was offered again to licensed pesticide applicators and others handling pesticides for extended periods of time. The tests represent one aspect of safety in applying pesticides. A total of 36 blood samples were analysed from 9 participants, but none required further action.

Training And Development

Farm Management

Farm Management activity was designed to improve the efficiency and growth of the farm business through provision of farm management services and by extending information to staff and to farmers. Major activities of the year focused on the development of Farm Management training material, farm records, agricultural computer software and their use in extension, staff training in farm management and resource development for on-going farm management programs.

Further improvements were made to the new farm account book - Farm Records for Farm Managers. Three thousand copies of the two versions of the account books were sold within the Province. A Farm Business Training package was developed and tested with 60 farm couples.

Extension And Development

An increasing response to the need for cost of production figures prompted staff to produce and widely distribute 40,000 copies of ten different Information Updates on production costs for crops, hogs, cow-calf, finishing beef, dairy, forages and grass seed production. Discussion papers were prepared and delivered on costs of production of soybeans, and involvement of the Department in extension. Additional publications were researched in areas of coping with serious financial difficulties, sources and uses of credit, machinery investment and pasture leases.

A major staff emphasis centered on the development of course content for Farm Business Groups. Five lessons were developed and tested with 60 individual farmers and farm couples. The Farm Business Group Project is a two-year program with emphasis on basic training and the development of a feasible farm plan.

During the year farm management staff were heavily involved in developing and monitoring computer software for staff use. Emphasis was placed on developing decision making agricultural software that would enhance counselling and evaluation of alternatives. Most popular programs were those on cashflow, planning, assessing debt load, crop budget, beef feeders, and enterprise budget. Staff participated in the development of a beef counselling computer program for identifying problem areas and facilitating planning.

Farm Management staff were responsible for facilitating, developing and training departmental staff in farm management, financial counselling,

legal aspects of farming, computer technology and stress counselling.

During the year staff were actively involved in the Manitoba Indian Agriculture Program, the committee on Agri-Food, Farm Management Strategy Committee, Beef Counselling Program Committee, Agro-Man Soybean Committee, Western Farm Management Extension Committee, Farm Management sub-committee of M.A.S.C.C. and Professional Update Training Project. Liaison was maintained with agri-business, other government departments, Agriculture Canada and the University of Manitoba, through numerous contacts and serving on joint committees.

Regional Activity

All five regions reported that farm financial management continued as a priority area. This resulted from farmers in all production sectors experiencing financial difficulty from low returns, high input costs, falling land values, production difficulties and management problems. The dramatic increase in demand for related services drew heavily on the time of farm management specialists and agricultural representatives. Manitoba's Interest Rate Relief Program continued to prompt many farmers to seek management advice and counselling.

The increased availability of micro-computers to staff proved most beneficial and indicated potential to improve both quality and efficiency of service to clients. Farm Business Groups set up in each region with membership ranging from 12 to 23, were most successful indicating support for substantial expansion during the next year.

In the Northwest region some 260 clients were counselled under the Interest Rate Relief Program. In addition, 47 other farm families were counselled in depth on financial management. During the year, four farm debt review panels were convened in the region. Sixteen participants took part in the new farm business group. Farm financial information was included as part of many general extension meetings and teleconferencing was introduced as a new method of instruction.

The Southwest region reported over 400 contacts related to the Interest Rate Relief Program and an additional 85 farm families counselled in depth. Three farm debt review panels were convened during the year. Client counselling involved providing information that would assist them to take one or more of these steps; consolidate debts, reduce assets, reduce assets and consolidate, expand or terminate farming. Farm management services provided by specialists and agricultural representatives ranged from brief enquiries to counselling sessions of several days.

Intensive financial counselling was also the main farm management thrust in the Central region during the year. A very heavy demand for counselling resulted from the Farm Interest Rate Relief Program, but many other individuals requested in-depth counselling too. Ten existing farm business groups in this region provided the vehicles for another large segment of farm management extension. Consensus research data was coordinated on budget projections, utilizing producer representation from specific commodity groups.

In the Eastern region farm financial management continued to be a top priority for staff, reflecting the continued economic squeeze facing farmers. Over 170 contacts resulted from the Interest Rate Relief Program and 150 additional operators received intensive counselling on topics such as credit options, record keeping, business organization, taxation and general farm management. Two debt review panels were held in the region. Other farm management activities involved two farm business groups, farm accounting courses, grain marketing sessions, retirement seminars and work with local managers of lending institutions. The first 4-H Computer Farming project in Manitoba was started at St. Pierre.

A heavy interest in the Interest Rate Relief Program in the Interlake region resulted in over 700 contacts in this connection, with 268 applications approved. A further 81 farm families were counselled in farm management matters. Financial management items were incorporated in ten meetings throughout the region. Some of the topics covered included farm financing, grain marketing, record keeping, income tax and other topics necessary in order to make sound farm business decisions. One Farm Business Group operated successfully at Selkirk as part of the province-wide pilot project.

4-H And Youth

The objective of the 4-H program is to promote citizenship, leadership, solid value systems and responsibility in young people of rural and northern Manitoba, through skill development projects, attitudes and knowledge.

The 4-H structure consists of volunteer councils at district, regional and provincial levels. These councils address programming needs for their specific area, with support from Manitoba Agriculture staff including program assistants, agricultural representatives, home economists, regional 4-H specialists, and the Winnipeg 4-H office. The councils are most valuable in providing the necessary grassroots input.

Provincial Activities:

The central 4-H office in Winnipeg is responsible for all provincial, national and international activities. The office also provides support to district and regional 4-H staff, while directly supervising the northern 4-H program.

Their direct liaison with Manitoba 4-H Council provides volunteer input into provincial 4-H programs and concerns, as well as initiating new projects and activities. The council, comprised of six 4-H leaders, six 4-H senior members and two government representatives has three major goals. They are:

- to improve volunteer participation, development and learning
- to encourage participation and support from corporate sponsors
- to enhance national and international 4-H relationships

Volunteers and staff planned and implemented over 24 provincial and national events, involving over 500 members and 400 leaders.

Annual 4-H Conference, a highlight in the 4-H year, allows district representatives to experience the annual meeting of Council, as well as having input into 4-H programming. Over 100 leaders, senior members, out-of-province delegates and staff attended this March Conference.

Volunteer leader training, a continued high priority of council, progressed into phase II, a program developed to assist project leaders. Over 250 project leaders have completed this six-hour course, involving workshops and support materials.

Manitoba 4-H Council, with assistance of corporate sponsorship and club donations, provided travel opportunities for 128 members and 54 leaders, both within and outside the province. Manitoba 4-H leaders and members travelled to Ontario, North Dakota, Saskatchewan, Alberta, New Brunswick, Nova Scotia, Washington D.C., and the United Kingdom. As well, members and leaders travelled on a variety of Open House Canada Exchanges.

Other Provincial 4-H events that compliment the program include: Clothing Speaks Conference, Provincial Horse Show, Provincial Dairy Show, Provincial Sugar Beet Achievement, Provincial Livestock Judging Competition, Provincial Public Speaking Competition, as well as participation in Agribition and U.S. National 4-H Dairy Conference.

One thousand dollar scholarship from Canadian National Exhibition, as well as a $500 scholarship from Hoechst Canada were awarded to two top 4-H members who are furthering their education.

The feasibility of establishing a Manitoba 4-H Foundation was proposed to Manitoba 4-H Council. The Foundation has received approval to incorporate and to use a seal. The Council continued to use "Grow with 4-H" as their promotional slogan. With the Minister of Agriculture officially declaring Manitoba 4-H Week, 4-H'ers all across Manitoba promoted the program with the help of press releases, book marks, placemats, sunvisors, 4-H pencils, and mini-cards.

Manitoba 4-H Ambassadors, continued to be an integral part of the program by assisting with conferences, workshops, competitions, rallies, and achievements. Their major event, besides an Annual Retreat, was the Provincial Public Speaking Competition, organized in conjunction with the Kiwanis Club of Winnipeg.

Four issues of the Provincial 4-H magazine, Contact, were distributed to over 500 4-H families.

The central 4-H office continued to assist the Manitoba Rural Youth Organization.

4-H Projects

The Department supplied project manuals and record books to a project enrollment of 6,406. Manitoba 4-H had 5,824 members in 311 clubs, and 2,040 volunteer leaders. New materials provided this year included:

Light Horse and Pony:	Unit I was purchased from Alberta along with a new Horse Record Book.
Beef:	Breeding and Health (Unit 2) slide/tape sets and lesson materials were used by members throughout the province.
Clothing:	Unit 4 was printed and distributed. Writing on Clothing 5 was commenced.
Photography:	Record Books were produced for Units 1, 2, & 3.
Handicrafts:	Leaders guide was developed and printed.
Woodworking:	Units 1 & 2 were converted to metric. Unit 3 from Wisconsin was converted to metric and printed for Manitoba use.

Leadership Materials: Reprinted for general distribution. Two Soil Conservation slide/tape sets, as well as a slide/tape set on Farm Machinery were produced.

Other materials for projects and general activities were reprinted upon demand, or purchased from other provinces and the United States.

Northern 4-H Program

The Northern 4-H program boasts a membership of 505 supported by 109 leaders in active clubs in The Pas, Carrot Valley, Flin Flon, Grand Rapids, Cormorant, Cranberry Portage, Wanless, Moose Lake, Thompson, Lynne Lake, Split Lake, York Landing and Shamattawa.

A variety of projects were undertaken by the members and leaders including beadwork, leathercraft, gardening, trapping, as well as regular 4-H projects.

In addition to local project meetings, members participated in regional activities. Thirty members attended Y.M.C.A. camp at Moak Lake. A Junior Members Conference was held March 26-28 in Thompson with 31 members participating and 9 leaders assisting. The conference, with the theme of "Hangin' In - Managing the Stresses of Growing Up" focused on friendships, communications, personal grooming, teens and the law, fitness, nutrition, money management, as well as various aspects of the 4-H program. Regional Public Speaking finals were held April 1983 in The Pas, with 2 senior members selected to participate in the Provincial Public Speaking finals in Winnipeg. Members have also participated in the Provincial Livestock Judging Competition, Provincial Careers Conference, livestock and grooming and showing demonstration, and workshops on public speaking, meeting management, clowning and record bookkeeping.

Leader training and development is a strong aspect of the Northern 4-H program. Thirty-two leaders successfully completed the Project Leaders' Management Training Course, taught by leaders and staff. Thirty-four leaders and junior leaders enjoyed 2 leader management training workshops in The Pas and Thompson in November. The newly formed Opasquia Leader Association has been very active, hosting a Northern Regional Leaders meeting that looked at the possibility of forming a Northern Regional Council.

Three leaders from the Northern Region Attended the March 1984 Annual 4-H conference, along with the Northern directors on Manitoba 4-H Council.

Raising the quality of programming in existing 4-H clubs continues to be the priority of the Northern 4-H Program.

Regional 4-H Activity

All regions carried out an extensive and comprehensive program at the district level. Activities were varied and wide ranging, including sporting events, camps, rallies, member training, leader training and project work. All regions reported a high level of activity in 4-H throughout the year.

In the Northwest region over 1,000 members in 48 clubs carried out an active program under the guidance of 412 leaders. In all districts emphasis was placed on communications. Extensive leadership training was carried out through the project leaders management training plan. Regional members' conferences were successful, as were the three major 4-H rallies held within the region.

A total of seven rallies and activity days provided major highlights for the 1,636 members in 4-H clubs in the Southwest region. Considerable emphasis was placed on workshops during the year, with strong support for the district clothing workshop for leaders and for workshops on handicrafts. The Southwest Horse Leaders' Association was very active in supporting this phase of 4-H, where major events included a regional show and two regional instructional clinics. Regional staff input to the beef project resulted in substantial instruction now being available in an audio visual format.

As in other regions the 1,470 4-H members in the Central region were active in public speaking, exchange trips, camps, community activities and specific project work. Fall and spring supper meetings held in each district were very effective in presenting basic 4-H information to members, parents and leaders. Junior and senior workshops were staged through the year and the project leaders management training course was well received by the leaders. Eight rallies were held in the region for the 85 operating clubs.

In the Eastern region major group education activities in all districts included district council meetings, fall and spring dinners, project leaders

Table 20
Manitoba 4-H Statistics

Project	1983	1982
Group Determined	192	200
Babysitting	147	124
Adopt-a-Grandparent	66	71
Mechanics	242	236
Beef	914	972
Dairy	77	112
Horticulture	137	97
Junior Leader	95	97
Light Horse & Pony	783	801
Cereal Crops	46	46
Outdoor Living	177	249
Exploring 4-H	303	274
Sugar Beets	45	68
Swine	40	32
Woodworking	443	430
Photography	168	175
Dog Care & Training	57	42
Power Toboggan	17	20
Self Determined	113	119
Home Nursing	22	29
On Your Own	33	58
Clothing	889	996
Foods	738	722
Home Design	91	65
Handicrafts	468	635
Leathercrafts	41	40
Others	52	65
TOTAL PROJECT ENROLLMENT	6,406	6,775

	1983	1982
Number of Male Members	2,153	2,148
Number of Female Members	3,671	3,924
TOTAL NUMBER OF MEMBERS	5,824	6,072
Number of Clubs	311	320
Number of Leaders	2,040	2,180
Number of New Leaders	700	681
Number of New Members	2,032	1,928
Average Age	12.1	12.1
Average Tenure	2.9	2.9

management workshops and project leader training workshops. For the members, workshops consisted of executive members training, modelling, demonstrations and public speaking information. Strong emphasis was placed on 4-H promotion through schools, restaurant placemats, libraries and the mass media. An active camping program similar to that of other regions involved 45 eastern members. A Manitoba first occurred at St. Pierre with the organization of a 4-H computer farming project, teaching farm management and crop production management using computer technology.

Regional and district 4-H councils provided strong support to the 45 clubs in the Interlake region. Additional support came from the Regional Horse Leaders' Association in planning all regional events for members in the 4-H horse projects. Major activities of the 4-H year in the region included public speaking competitions, achievement days (50) rallies (3), one-day workshops (4), summer camps (2), leadership training, travel programs and promotion activities. Staff and club members were active in promoting the 4-H image through mass media, promotions in schools and malls, 4-H week, 4-H family night, picnics, bonspiels, fund raising and other community service activities.

Rural Home Economics Services

Home Economics services are delivered in rural Manitoba by 17 Home Economists working in Manitoba Agriculture. The Home Economics Directorate, Manitoba Health, provides teaching resources, technical support and staff training for the field Home Economists. Young farm and rural families with limited incomes and/or resources are the major target groups for the preventive and remedial money management, nutrition education and related consumer and homemaking skills programs. During the year a total of 51,524 Manitobans were reached with Home Economics services.

Planning programs to meet the needs of each community in the area is a major challenge for the Home Economist. Identification of community needs is facilitated through regular meetings with Extension Program Committees and Farm Women's Organizations. These advisory groups contribute community involvement in determining program direction, and support the staff in marketing the Home Economics Program.

Initiative work done by the Home Economist has increased community awareness of her expertise as a source of financial management information and services in the area of planning spending, managing purchases and dealing with financial problems.

During the year, several Home Economists supported the Financial Management Specialist at the Home Economics Directorate in the development of a homestudy course "Only You Can Mind Your Money", for rural and farm families. Over 800 people participated in the homestudy course. Follow-up to the course involved one-to-one counselling and seminars or workshops on specific financial management topics for the participants.

A variety of methods are used by the Home Economist to transfer financial management information: one-to-one counselling with people in financial crisis; single sessions, seminars or workshops on budgets, record keeping, filing, wills, insurance, estate planning, consumer law, income tax, values and goals, credit; courses that include several of the above topics. The Home Economist has worked with the Agricultural Representative and Farm Management Specialist to plan and team teach financial management programs. Sessions on these important areas have been presented at farm business groups, pre-marriage classes, high school classrooms, 4-H conferences and leader training, and Women's Institute, church and community groups. During the year a total of 7,226 people were reached with financial management information.

Nutrition

Nutrition education programs presented by Home Economists help Manitobans to improve and maintain food habits to attain optimum nutritional status within their economic means.

The pregnant woman continues to be the focus for preventive nutrition programming. Prenatal and early-bird nutrition classes continue to be an effective method disseminating nutrition information to promote eating habits that will aid in producing a healthy baby. Infant feeding information for mothers is passed on at child health clinics, post-natal classes, breastfeeding inservices, in mailbags and in consultations with doctors and public health nurses.

Home Economists continued to promote good nutrition through support to day cares and classroom teachers involving workshops, individual follow-up and in some cases menu assessment with day cares. Weight reduction counselling and training was provided through community groups. The promotion of safe food preservation involved workshops, fair displays, publication distribution and consumer inquiries. Food preparation courses were popular, particularly the New Wave in Cooking and the Wok Cooking courses, which teach homemakers to serve nutritious, economical meals to their family.

Clothing

The Home Economists provided clothing programs aimed at helping consumers to decrease clothing costs for families. This involves wise clothing purchases and proper care and maintenance of garments to maximize their wear life and decrease clothing expenditures.

Clothing construction courses continue to be popular methods of reaching young farm families with dollar saving programs. These include Sewing For Little People, basic sewing, family sportswear (jogging suits, T-shirts, rugby pants), denim, lingerie, swim-wear, make-overs, and fitting courses. A new wardrobe planning package program was used with a

variety of community groups and 4-H members and leaders.

The Clothing and Textile Specialist continues to provide strong support to all home economics activities in this area through research, consultation, training, program delivery and direct client service.

Housing

Priority programming involved stretching the housing dollar and saving energy. Housing News, a quarterly newsletter published by the Housing Specialist at the Home Economics Directorate, was distributed by the Home Economist to housing educators, retailers and others concerned with housing issues.

New housing programs which the Home Economists co-ordinated during the year were Furnishings For Savings workshops and Wood Heat Seminars. Workshops and/or seminars on Furnishings For Savings provided practical ideas for furnishings which are attractive, inexpensive and will conserve energy in the home. Wood Heat seminars were jointly sponsored by the Home Economist, the Federal Government and the Consumers' Association of Canada. They provided consumers with reliable information on the selection, installation and safe use of wood burning appliances.

4-H Support

Home Economists continue to be actively involved in the 4-H program which reaches rural youth and develops community leadership.

Home Economists provide support to Program Assistants, 4-H members, leaders and parents. They are involved in 4-H promotion, leadership training programs, new project training, meeting and project management workshops, achievement judging, input to rallies, district council, regional and provincial conferences and summer camps.

Media

Home Economists use mass media extensively and effectively to increase awareness and transmit home economics information to the public. All Home Economists provide weekly columns to local newspapers. Radio spots are produced by the staff in Northwest, Southwest and Eastern regions, and by other staff as the opportunity arises.

Southwest and Northwest Home Economists contribute regularly to the weekly television program "Take Time". Other Home Economists use the programs in their areas on cable television. Tapes from these programs have also been used by the Home Economist in small group settings.

Regional newsletters produced by Interlake staff (Around Home In Ten) and Central staff (On The Home Front) extend home economics information to a wide regional audience.

Agricultural Extension Centre

The Agricultural Extension Centre, located in Brandon, continued to coordinate adult education and extension training activities for many rural Manitobans. Office space was provided for Manitoba Agriculture's South West Regional staff plus Central specialists in dairy, conservation and the Manitoba Beef Commission. A wide range of goverment and other organizations use the facilities for educational meetings.

There were 30 courses organized by the Centre during '83-'84, and total attendance increased by 1,400 over the previous year to 3,617. With a total attendance at all meetings, seminars and courses hitting an all time high of 31,492, the Ag Centre continues to be the most used by the public, of any provincial government building in Manitoba.

Course instructors for Ag. Centre programs came from Manitoba Agriculture, Ag. Canada, Universities of Manitoba and Brandon as well as from out-of-province. Farmer-speakers provided a practical input to many sessions. In 1983-84 Wheat Day focused on the production problems associated with growing a traditional crop and drew 100 farmer participants. We again held an organic farming course, helped organize a province-wide farm family seminar series, coordinated 2 computer courses and highlighted farm management and soil conservation topics in a number of sessions. The annual Manitoba Beef Cattle Seminar allowed producers to grade live market animals, then later compare their assessment with the actual carcasses of these animals.

Evaluation Publicity & Outreach

In addition to daily course evaluation by participants, over 3,000 farmers and others were contacted with a mail-back type questionnaire. A large majority of the respondents seem well satisfied with the course offering, the food and facilities and would accept a daily course registration fee hike to $5.00. Another survey proved that slightly under half of our attendees come from a 30 mile radium of Brandon. Publicity is aided by local and provincial media, course summaries are offered for most courses and, when staff time permits, video taping of outstanding resource people is carried out for future use.

Agricultural Manpower Service

This service is administered through the Federal/Provincial Agricultural Employment

Development Agreement. The agreement is in effect until March 1986. Some general direction for the Agricultural Manpower Service comes from the Manitoba Agricultural Employment Development Committee established under the agreement. Regular contact and co-operation with regional personnel at both the provincial and federal level is maintained.

More specifically, duties related to this committee include:

1) Co-ordination and co-operation with regional personnel for the approval and evaluation of agricultural training occuring on the job under the General Industrial Training Program (G.I.T.). This service is also responsible for all the G.I.T. work being done with the Manitoba Indian Agricultural Program.

2) Participation in determining supply and demand for farm labour and in developing the appropriate training programs.

3) Assist in the organization of surveys, seminars, and studies relating to agricultural training needs of farmers and workers, and to assist in the initiation of training programs.

4) Co-operation and liaison with the Departments of Education and Agriculture in determining content of training programs and the location for delivery.

5) Review, print and distribute guidelines and information on employment standards, personnel management, employer/employee relations, and workers compensation as related to agriculture.

Agricultural Training

The Canada Manpower Training Program (C.M.T.P.) is now used for training programs developed and delivered exclusively for farm workers or for an Applied Agriculture course offered through Assiniboine Community College (A.C.C.). Manitoba has some responsibility for reviewing the production content of these courses.

Table 21
1983-84 Canada Manpower Training Program

Course	Number of Courses	Attendance
Applied Agriculture	2	50
Dairy Herd Manager	1	12
Farm Worker General	4	45
Farm Equipment Operator	1	16

Assiniboine Community College also delivered training to farmers for the Manitoba Indian Agriculture Program (M.I.A.P.). During the year one introductory farm management course drew nine participants and seven enrolled for a farm management II course.

Short specialized training was offered on a variety of topics including hydraulics, bookkeeping and tax returns, wherever small groups of native farmers identified a need. Some 60 people attended gardening courses at seven reserve locations.

During the year 85 days of agricultural training were delivered at the Rockwood Institute. General Industrial Training during the year resulted in 89 contracts signed with farm employers and 89 trainees completed the course. Average wage for the duration of the contracts was $5.57 per hour.

Portage Farm Labour Project

Under this project Manitoba Agriculture paid for the delivery of a Basic Agriculture Course of 4 weeks for 15 trainees. These trainees were from the vegetable industry in the Portage area.

As of November 1983, a new project replaced the Portage Farm Labour Project. The new project, Portage Employment and Energy Centre, is an employment readiness project, but does not deal exclusively with the vegetable industry. While the training does prepare people for employment generally, agricultural employment following the training will be a viable option. The individuals selected for the project are all contacts made through the Portage Farm Labour Project.

This project is funded by the Federal Government. Provincial assistance is provided through one staff

person whose involvement is cost-shared through the Federal/Provincial Agricultural Employment Agreement.

Offshore Workers

Each year the Manitoba Farm Workers Association and those vegetable growers seeking offshore labour, meet and agree on a recommendation to the provincial and federal governments, as to how many offshore workers should come into Manitoba. For the summer of 1983, 33 offshore workers from Mexico were approved for entry into Manitoba.

Agricultural Exchange Program

Through the International Agricultural Exchange Association (I.A.E.A.) 85 trainees arrived in Manitoba during 1983. A five-day orientation seminar was held in April, immediately after their arrival. The trainees then went to live and work on Manitoba farms until October, with the exception of a three or four week vacation to tour North America.

Agricultural Societies

Agricultural societies have been contributing to the rural and agricultural scene in this province since the early 1870's. In 1983 there were 64 societies operating in Manitoba.

Manitoba Agriculture initiated a program in 1979 to help mark centennial years where agricultural societies had operated for 100 years. During 1983 Anniversary Plaques were presented to Carberry and Manitou, bringing to 17 the number of such awards to date.

The Department provides support to agricultural societies through various grants. Building grants for new buildings and grounds maintenance amounted to $42,500 for Class "A" societies and $35,000 to Class "B" societies. An amount of $44,350 was allocated to 43 of the 56 eligible "C" Class fairs. Prize money support was provided in the amount of $60,500 for Class "A" societies, $41,526 for Class "B" fairs and $118,222 for Class "C" fairs.

Each year in November a number of Manitoba livestock producers show animals at the Canadian Western Agribition at Regina. A grant of $5,500 was provided by the Manitoba Government to assist with prize money.

In recent years exhibitors have been more selective in the number of fairs they attend. Livestock entries have been down at most fairs due to increased costs of transportation, length of fair and other expenses involved. The larger "B" class fairs have been more fortunate in maintaining their entries.

Annual Conferences

1983 was the second year that a conference of Agricultural Societies was held at a central point in lieu of district conferences. This meeting was held for two days in November at the Brandon Extension Centre.

Societies gave reports on their activities, listened to invited speakers and conducted discussion groups on topics related to Agricultural Societies.

Newsletters

A Newsletter containing current information regarding Agricultural Societies was circulated to Home Economists, Agricultural Representatives, and Agricultural Societies.

Bursaries

The bursaries for a first year student in Agriculture and a first year student in Human Ecology were raised to $500 from $200 this year. The 1983 winner of the Evelyn Ames Bursary was Jo-Anne Moran of Russell and the N.C. MacKay Bursary went to Kelly Diane Bayliss of Miami. The local agricultural society provides a recommendation with each application, while University staff make the final selection of the winners.

Manitoba Agricultural Museum – Austin

The Manitoba Museum is managed by an administrator and a small staff, supplemented by students during the summer months. The Province of Manitoba provided S.T.E.P. students to act as tour guides and provide assistance with restoration work.

The Museum attracts visitors from all parts of the world through the summer months. The special four-day Thresherman's Reunion held in late July each year is the culmination of the efforts of many local residents interested in maintaining and preserving some of the early methods of farming.

Revenues from the reunion and the casual visitors, assist in maintaining the Museum, but substantial grants are necessary in order to maintain and develop the Museum. Grants from Manitoba Agriculture in 1983-84 amounted to $120,000, to assist with operation and maintenance.

Keystone Centre

Built in 1973, the Keystone Agricultural and Recreational Centre in Brandon serves the agricultural, recreational and entertainment needs of Brandon and surrounding districts. Each year the

Provincial Exhibition uses the facilities for the Royal Winter Fair, Provincial Exhibition (summer fair) and Ag Ex (fall fair). Livestock Breed Associations and individual producers also use the Keystone Centre for shows and sales throughout the year.

Under the Keystone Centre Agreement the Province of Manitoba and the City of Brandon share equally in any operating deficit. In 1983 the operating deficit was $99,141 making the provincial grant $49,570.

Horse Race Meets

During the year, harness horse racing meets were held at Portage la Prairie, Wawanesa, Carman, Virden, Carberry, Dauphin, Deloraine, Crystal City, Glenboro, Killarney, Holland, Rossburn, Russell and Minnedosa. Swan River was rained out. Each Society was supported up to a maximum of $10,000 per day. This was made possible through the retention of monies collected from pari-mutuel betting, plus a supplemental grant of 2½% of the total betting pool. The total supplement grant was $26,105. The pari-mutuel tax retained was $78,325.

The Manitoba Women's Institutes

The Manitoba Women's Institutes involved a membership of 1,684 active members in 1983, located in 102 Institutes throughout the province. The Women's Institutes provided valuable family and community oriented educational and social programs, on topics from wife abuse and 4-H activities, to pension legislation and the Garrison Diversion project.

The provincial board worked very closely with the Home Economics Directorate and in the field with District Home Economists, providing leadership and social support in many areas of general need and concern.

Manitoba Agriculture's grant to the Manitoba Women's Institutes in 1983 was $31,000.

Manitoba Farm Vacations Association

Organized in 1972, this association through its 60 active host families, offers prospective vacationers an opportunity to enjoy first hand, rural mid-western hospitality.

Host farms offer a wide selection of what farming is all about, ranging from large cattle ranches or major dairy operations, to grain and mixed farms of all sizes. Involved farm families supplement farm income in a small way and enjoy the social interaction.

During 1983, the 60 active host families in Manitoba hosted 9,527 farm guests. School tours numbered 295, with over 18,600 students visiting host farms. During 1983, the Farm Vacation Program received a provincial grant of $23,000.